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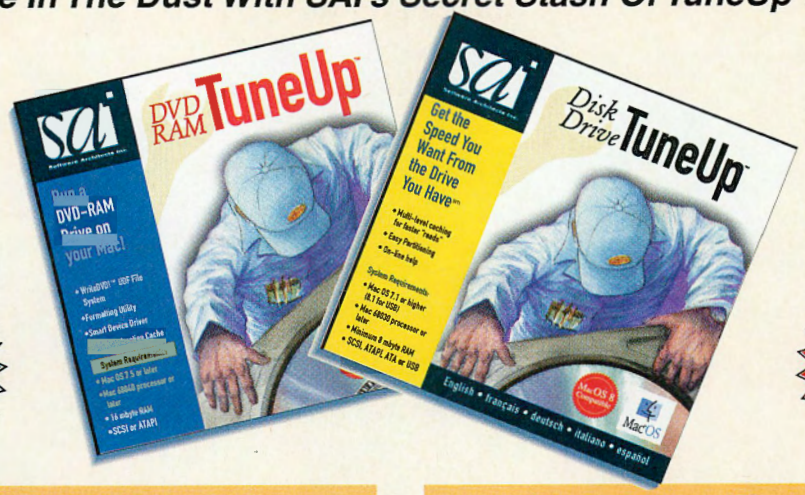

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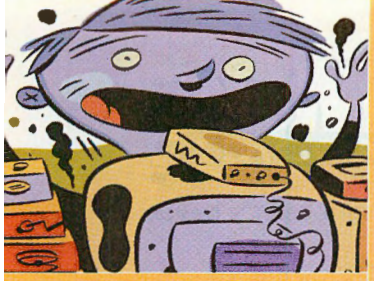

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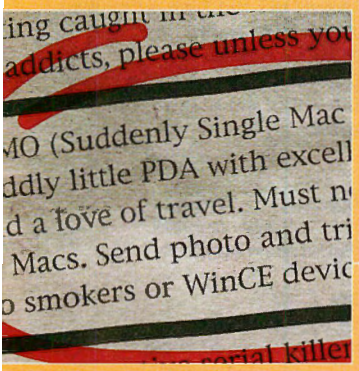

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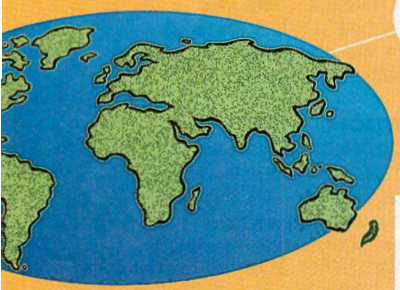

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IT'S TIME TO TURN THE TABLES on the record industry.

LOVINGLY RENDERED by Adam Vanderhoof with photos by Aaron Lauer.

JULY 1999

Mac ADDICT 35

highlights

26 Crashproof Your Mac

Sure, we're not back in the days of Mac OS 7.5.2, when you got a type 11 error every 43 seconds, but let's face it—your Mac probably crashes more than you like. We're here to help with our guide to making your Mac as stable as Christian Sla—ah, I mean Tom Hanks. Plus, as an added bonus, we'll tell you how to survive the worst Mac disasters. **BY NIKKI ECHLER**

34 Learning to Love Again

All you Newton folks, we have great news: You've mourned long enough. Have we ever got someone for you to meet—it's sleek, slim, and goes by the name of Palm. We'll help you fill that PDA gap in your life with a cute digital companion, plus we'll help you get together with email, the Web, and everything else to complete your relationship. **BY JOE HOLMES**

40 The Virtual Mac Traveler

Do you dream of visiting far-off lands and meeting exotic people, but lack the intestinal fortitude to get on an airplane? We'll show you how to tap into your Mac's multilingual capabilities and circle the globe without leaving home—unless you want to. **BY RICHARD E. MEYEROFF AND WENDY J. MEYEROFF**

how to

76 Make Movies with MovieWorks

Did you think you'd need a pile of money and a month off before you could make your own interactive QuickTime movies? Think again. Thanks to MovieWorks from Interactive Solutions, even your mom can create multimedia. So make her. Just think of all the things she made *you* do when you were young. **BY RICK SANCHEZ**

80 Turn Your Vinyl Records into Audio CDs

Phillips may have a CD-to-CD recorder now, but let's see the company come out with a record-to-CD deck. While we wait, why not fire up your Mac and start burning your vinyl right now? It doesn't smell as bad as that sounds, and it shouldn't have *too* many toxic by-products. **BY JOE HOLMES**

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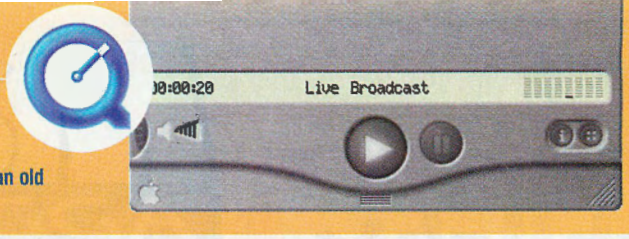

A TRENDY NEW LOOK for an old friend—ain't it pretty?

every month

12 Editor's Note
With the rise of the Internet and the end of Apple's woes, the way Mac user groups do their work is changing fast.

14 Letters
You have your cake and eat it, too—but you fail to save a piece for us! Shame on you!

18 Get Info
I stream, you stream, we all stream for QuickTime 4! Then read on for the kindest cut of all, the latest twists in the iMac saga, mystery Mac hardware, PEG standards demystified, and the triumphant return of the *MacAddict Index*.

24 Scrapbook
We pick apart the glossy new look of Apple's QuickTime Player application, from its slide-out track listings to its custom controls, and take a side trip to the best virtual submarine tour on the Web.

46 Reviews
Summer's here and so's the gear—tested and approved (or maybe not): zippity ZIF upgrades for your G3, ambitious Adobe GoLive 4.0, LiveStage DR 1.0.1 versus Electrifier Pro 1.0, StuffIt Deluxe 5.1, Starship Titanic (finally!), Civilization II Multiplayer Gold Edition, and more Mac hardware than you'll find in your local Best Buy. Really.

74 Power Play
Have you played Quake 3? We have, and we died a million times just to bring you the details and pictures. Find out which Apple executive gets into gaming—again—and check out our most wanted games list!

84 Ask Us
Want to know how to put USB in your PowerBook, manage URLs, and weed out tons of unwanted extensions? So do we. The difference is that we found out, and we're telling you all about it.

112 Shutdown
Our nose for news got a whiff of the weird. Smell it! Smell it!

SO *THAT'S* what it looks like from jail.

MacADDICT 35 THE TEAM

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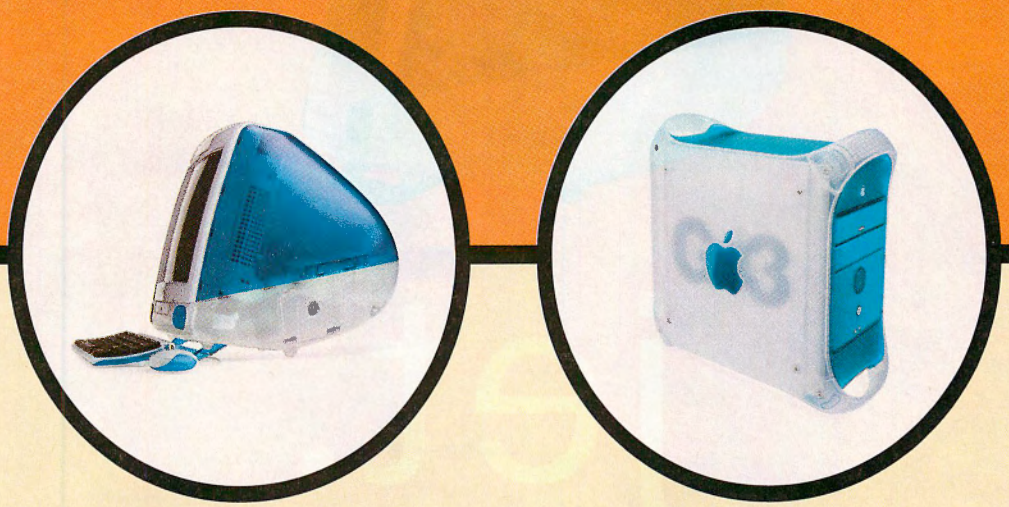

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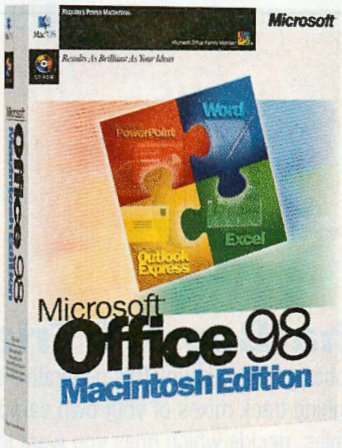

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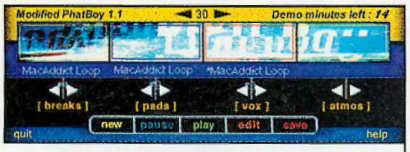

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Deer Avenger Demo

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IN THIS CORNER, wearing purple hair and weighing in at 1.3MB...

Tomb Raider Gold Demo

She's baaack! Actually, this is a little more like a blast from the past. This Gold demo is the Mac version of Tomb Raider I, the adventure that started it all. We join Lara Croft once again as she travels around the world in search of the fabled Scion. Rampage your way through bat-infested caverns, battle it out with wolves and alligators and bears (oh my!), and plunge into the depths of the underground waterways. Get ready for some acrobatic maneuvering in this Level 2 demo.

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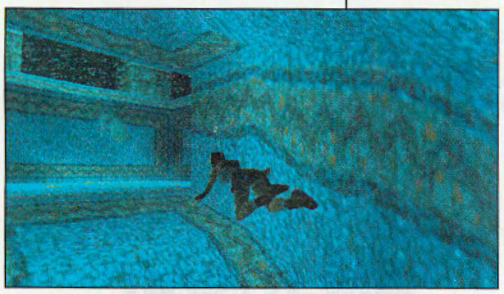
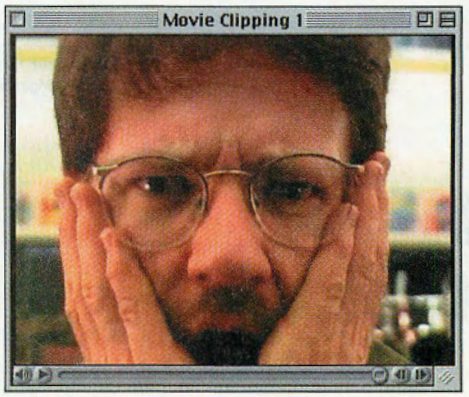


DON'T WORRY—she won't sink, thanks to her silicone flotation devices.



Oh #@*&!!! This month's staff video could've been an epic, considering we had tons of footage. We give you a few bloopers and outtakes from "Automated Death"—we'll call them "Automated Take 2."

See you at MacWorld New York July 21-23, 1999
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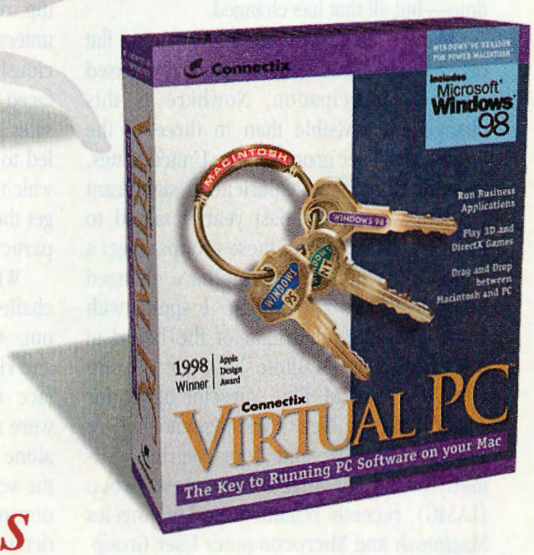
Sometimes *faking it* is better than the real thing



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editor's note

The Internet changed everything for grassroots Mac communities.

In the days before I came to work at *MacAddict,* I had another life as a member of the Sequoia Macintosh User Group in Arcata, California. Back then before the Internet, as a SMUG member I got a monthly newsletter, help from experienced Mac users, and a bulletin board or floppy trade for the latest shareware and updates. The group also had special interest groups and monthly meetings—a great place for getting to know your fellow Mac user and for huddling together when Apple's future looked less than bright. That was pretty standard user group fare at the time—but all that has changed.

Many user groups are experiencing flat or shrinking membership and decreased member participation. Nowhere is this change more visible than in three of the largest Mac user groups in the United States, each of which has experienced significant challenges over the past year. I talked to people connected with these groups to get a handle on why user groups have changed and where they're heading. I spoke with David Schnider, chairman of the board at the Berkeley Macintosh User Group (BMUG); Peter M. Fine, director of vendor relations at the New York Macintosh User Group (NYMUG); and Tom Negrino, formerly of the Los Angeles Macintosh Group (LAMG), recently renamed the Los Angeles Macintosh and Microcomputer User Group. All three pointed to one principal force behind these changes: the Internet.

While this may seem like a no-brainer, it actually goes pretty deep, because it affects how each of us gets information. Most user group members joined to get news, software, or access to a Macintosh-using community. Now that you can easily access all of those things over a 28.8-Kbps modem connection, the drive to join a user group is much less urgent.

Take news, for example. Printing a newsletter is expensive, and by the time it gets into members' hands the news is out of date by Web standards. With the proliferation of easily accessible software (both shareware and updates) via FTP, the need for floppy swaps and private bulletin boards has diminished. And while it's still fun to get together with fellow Mac addicts, Usenet and various chat groups and bulletin boards provide ample forums for voicing opinions or getting help. The net result: User group members could get the same services elsewhere more cheaply and conveniently. Membership started to dip, reducing revenues as well as volunteer assistance. It sounds suspiciously like the downward trend Apple faced in the mid-1990s—lower unit sales led to dropping revenues, which led to weakened product perception, which led to still lower unit sales...you get the general picture, and it's not a particularly pretty one.

While user groups faced other challenges (such as volunteer burnout, Apple's recent dip in fortunes, and rising demand for services in the face of shrinking revenues), these were secondary factors. The Internet alone may have been enough to tip the scales for many groups. But that doesn't necessarily signal their demise; it merely means they'll have to change how they do business.

BMUG, NYMUG, and LAMG have taken three different approaches. BMUG has tackled the problem by going virtual—that is, the organization is concentrating on the BMUG Web site and, more important, on Planet BMUG, a first-class BBS providing news and software updates. NYMUG has partnered with Charles River Consultants, a private consulting firm, to stay in business. And LAMG has a new board of directors and a sharper focus. If, as Peter Fine of NYMUG believes, these trends are cyclical, user groups will eventually make a comeback.

So what does that mean for you? Should you join a user group, or are they a disappearing breed? Now that Apple's hard times are over, the need to huddle together in a resistance cell has all but disappeared—after all, Reuters is using the word *resurgent* to describe our favorite formerly beleaguered computer company. But the desire to get together with fellow Mac heads and dream up a new product is still strong, and user groups are still a great place to get help, information, and software. And you may be the one to lead a new breed of user group. After all, the flip side of change is opportunity.—*DR*

The Internet alone may have tipped the scales for many user groups. But that doesn't signal their demise—they'll just have to change how they do business.

Farewell to EvangeListas

On April 15, 1999, the EvangeList mailing list closed down. With Guy Kawasaki as host and with lots of tender loving care from John Halbig ("The Digital Guy"), the EvangeList eventually boasted 40,000 subscribers and carried news of job listings, Mac ammo, and other Mac-related goodies. But—citing Apple's amazing turnaround—Apple and Guy decided to retire the list. In his farewell message, Guy noted that the list's original purpose was to "counteract the negative news about Apple and Macintosh, and I believe that EvangeList has served its purpose—fantastically, as a matter of fact."

If you're a former EvangeLista, you have a few alternatives. First check http://www.powerviews.com/evangelistas. There are also alternatives from Apple (http://www.apple.com/hotnews/subscribe.html), Macnologist (http://www.macnologist.com), and TidBits (http://www.tidbits.com). If you want to see what Guy is up to, you can certainly subscribe to his new mailing list at http://www.garage.com/resources/mailinglists.shtml.

We bid the EvangeList a fond farewell. We can console ourselves, though, by knowing that its retirement resulted from Apple's success, not its failure. If you want to view past EvangeList messages, the EvangeList Web site, hosted by *MacAddict,* will remain up for archival purposes as long as there's interest.

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letters

This month's round of reader absurdity really takes the cake!

This Month

WRITE TO US: MacAddict, *150 North Hill Drive, Suite 40, Brisbane, CA 94005, or email to letters@macaddict.com. FOR CD PROBLEMS: Go to http://support.imaginemedia.com. FOR SUBSCRIPTION QUERIES: Call (toll-free) 888-771-6222.*

Illustration by Adam Vanderhoof

GET ON, GET ACTIVE. Talk to us and to other Mac addicts at the Web site.

I Know You Are, but What Am I?

In your most recent issue, you refer to Adobe Acrobat as Adobe Clown. This is not journalism, it's childishness. If someone were to come into your office with a false leg, you would not call him or her Stumpy. Shame on you for sinking to this level. I'm aware that Macs are better than any Windows machine, but just because a few features (however major) are not cross-platform is no reason to lose your objectivity.—Ian Schulze

No, He's Always Disgruntled

Remember the two kids at the Macworld '98 Expo who went to your little conference room? We ate all of the bagels and took those two posters off your hands. I was the kid who said, "Look, it's the Prison Guy!" I was just wondering if anyone had called him that casually before, because the face he made at me was that of a disgruntled postal worker. Whatever you do, don't fire him. (If you know where I'm coming from.)—Nate Taylor

Mix Populi

Way back when, so I'm told, Betty Crocker first made her cake-mix-in-a-box and it was a failure—but a minor change transformed it into a hit. She made it so the baker had to add an egg *and* water instead of just water. The housewives of the era felt as though they were actually cooking something and felt better about purchasing the mix (I guess). People are weird. Anyway, if dealers are having a hard time selling some of the iMac colors, why not ship one iMac for every five cases? The case can't be that expensive, and then the dealers could even do a "build-your-own" thang or even a "pick-your-own" promotion or two. So ship one iMac and four cases in the other colors. There. Did I solve the problem?—Greg Haas

Cancel Our Launch Date

I'm on the train headed to work, reading my June *MacAddict*. I go first to *Shutdown*, then to *Letters* to get all the silly giggling out of my system (it also encourages people to give you more space on the subway). Then I checked out "Oh #%@*!!!!! What to Do When Undo Just Won't Do." Great article, Kevin, except I think I can outdo one of your undos. For those who, like me, have IDCS (Involuntary Double-Click Syndrome, closely related to other fat-finger disorders), and who keep launching applications when they only want to click a file for a Get Info, the $5 shareware control panel Bail (http://www.poppybank.com/Bail) is a god-

Recently Sighted

I recently attended a potluck lunch and decided to bring a Macintosh-theme item. After discussing it with my girlfriend, Jordi, I decided to make a gingerbread house in the shape of my blue-and-white G3 using a recipe from Betty Crocker's *Holiday Baking* cookbook. The entire G3 was edible (in fact, my coworkers descended on the confection like a plague of locusts). One coworker liked my idea so much that she suggested we should organize an edible computer contest.

I used a variety of candies and cookies as decorations. Here are some of the highlights:

*** A blue fruit rollup in the shape of the Apple logo.**
*** Shortbread cookies for RAM.**
*** A white Tic Tac, a green Spree, and cupcake decorations for the buttons on the front.**
*** An array of candy corn for the processor's heat sink.**
*** Black and red licorice for wires.**

Who knew the *G* in G3 stood for gingerbread?
—DAVID KANE

send. On launch, every app (except those you tell it never to bail on) pauses for a short period of time. During this pause, your cursor changes to a generic application cursor that warns you just did something you may regret. One mouse click (I suppose a second click won't hurt) stops that launch dead in its tracks!—Bob Boyle

Everyone's a Critic

Regarding April's staff video, David Fleming says "enough giggling girls" and Robert Jailall says "ban the chicks." Screw that. Two reasons: 1. Nikki turned me on to Goldfish. 2. Heidi. I love the way she says the word *strawberry*. You guys should hire her. Her presence would help ease the lingering pain I've felt ever since the loss of Kathy Tafel to Apple. (Sniff, sniff...no, really, I'll be fine.) Still, should the ladies of *MacAddict* decide to display a little more backbone than hitherto when it comes to spilling the blood of real PCs in creative ways, I'd cheer them on. That paintball episode was pretty wussy.—David W. Payne

I'd have to agree with Robert Jailall in saying that your staff videos have sucked for a while. No one wants to see a mini movie about crap. I loved the ones when *MacAddict* was new and we found out about all the great people who make the magazine. I have an idea: Have videos of what really goes on within *MacAddict*, maybe show someone teaching Real Basic or take a video camera with you when you do lunch, go on vacation, and so on. Real life is much more interesting than story lines. I'm not trying to get anyone upset, it's just an honest opinion!—Kurt Foster

Wait until you see "Automated Reader Death"—if you survive, that is. Mwha ha ha ha!

I recently downloaded QuickTime 4 and wanted to test it out on the conclusion to "Automated Death." After finishing the movie (I knew Prison Guy was innocent), I ran it in fast forward. Hilarious! I laughed so hard I nearly wet my pants! The best parts are when everyone dies in the beginning and when Jeff and David fight. I recommend you try this—it's hours of fun. OK, I lied, maybe minutes.—Drew Smorul

While watching the staff movie on the May issue of The Disc, I could not believe my eyes when I glimpsed an iMac just sitting on the floor! It is a shame that you people have nothing to do with that iMac. Why don't you give it to someone who can put it to good use (like me, for example)? I must also give my input on someone's comment about this

You Know You're a Mac Addict When...

...you name your dog Dennis and your cat Angus.—RANDALL SLUHAN

...your New Year's resolution is 1024 by 768.—TIM SHEARE

... you're filling out a subscription card and for the zip code you write "external 100MB."—ALEX HONGO

...you look in the mirror and wish you had an Appearance Control Panel.—KATHERINE HOLTZMAN

...you find yourself trying to analyze what font is on the Post Alpha-Bits cereal box.—BOB LARSON

...you screen your girlfriends by their platform preference.—DREW S. LEVITT

...at bookstores you take the subscription inserts from *MacAddict* and put them in PC magazines.—ADAM LENTZ

...you buy *A Bug's Life* to supplement Steve Jobs's income...since he doesn't get any from Apple.—BRENDA LADD

...your friends swear they hear a startup chime when you wake up.
...you're sure you can see a little watch on your coffeepot while it brews.
...you sing the Sad Mac arpeggio as your excuse when you're late to work.
...you shop the produce aisle solely for items that match your iMac.—JIM LAU

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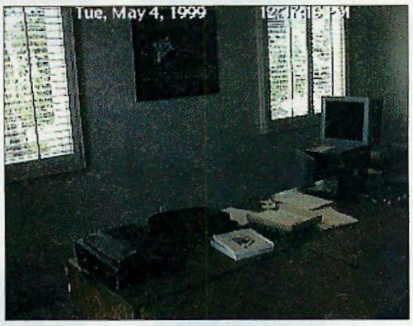
column being too jovial. It's the coolest part of the magazine!—Andre Brown

Apparently Not Much

I'm currently reading *Dealers of Lightning*, the story of Xerox PARC, and I was just wondering where Steve Wozniak is these days and what he is doing.—Jim Carruth

You can keep your eye on Woz and his activities by peering through the WozCam at http://wozcam.woz.org.



486 My Butt!

You say the minimum requirements for NT Server are a 486/33 processor, 16MB of RAM, and a 125MB hard disk ("XXIII Reasons You Should Care About Mac OS Server," Jun/99, p36). Have you ever *seen* NT Server run on the kind of hardware just listed? Windows NT doesn't put up decent performance numbers unless you have a Pentium II or better, never mind the other specs. (In fact, I will personally mail you a crisp $1 bill if you can successfully install NT Server on a 486/33 machine!) And couldn't you give the advantage to OS X Server for the core OS? NT's protected memory is puny: I've seen basic mail services take down NT Server numerous times. Besides, OS X's core is (and is based on) open source code. Don't these factors nix the tie with NT?—Mike Stephens

I was reading your article on Mac OS X Server and I noticed something in the "Battle of the Servers" sidebar that almost made me gag: Under "Requirements" you gave Windows NT the advantage over Mac OS X Server. Now, I assume this is because of the low-cost hardware requirements you show for an NT Server. But anyone with *any* Windows NT experience knows a 486/33 with 16MB of RAM just won't cut it. Sure, it'll run, but forget about *doing* anything with it. It would take a lifetime just to start all the services NT loads, not to mention the service packs you would have to reapply if you ever installed something new on your server. I think comparing OS X Server to Linux with Samba might be a better match in terms of features.—Dave Gammage

It's What Steve Jobs Would Wear

As I begin my monthly jaunt through *MacAddict* and come to *Letters*, there is a postcard and a nice note. The sentiment is swell, but what's with the guys wearing jeans on the beach? I don't know how much you get out, but if I can enlighten you on beach etiquette, jeans don't cut it. You are there to get sun, correct? Love the magazine, but you guys can be kinda confusing sometimes. —Craig Allen-Bailey

Cookin' with PowerPC

While I spend most of my time creating Web sites, I also love to grill. After I overclocked my G3 400MHz up to 840MHz, I had a little heat problem. That's when it hit me. If I let the heat disperse through the top of the G3, I would have an instant barbecue grill. Now, instead of using charcoal, I simply crank up Photoshop and start working on a 40MB image. Presto! Instant heat, baby! If I could just get rid of that nasty melting motherboard smell...—Jim T. Graham

That's nothing compared with the meat-charring power of a Pentium III running Windows NT—one area in which we're happy to give the Wintel world the title.

Bill May Buy the Rights

I was listening to one of my favorite CDs when I happened to notice these lines:

I don't want no damage
But how am I gonna manage you?
You want a percentage
And I'm the fool paying the dues...

Talking like that, don't you think they should have named the band Fleetwood PC?—Rainee Scott

They Call It Satire, We Call It Comedy

I am very pleased with Apple's new marketing scheme; it's high time the company dropped Goldblum, and seeing as Apple can't drop him into a vat of environmentally safe vegetable-based orange dye, I say out with the old and in with the new! Fifi is going to be the next symbol of cool in America! Sales of white poodles will skyrocket! Mac-loving tourists will flood France! The world will never be the same! And to think that without *MacAddict*, Apple would have sprung Fifi on me without warning! Instead, I find a brilliant piece in June's *Shutdown* section, reminding me just how hard you people work to keep us all enlightened about the next big thing from Apple!—Emily Chiller

PlainTalk Made... Uh, Simple

In the "Command Your Mac" feature (May/99, p36), you made it quite clear that people who own iMacs or new blue-and-white G3s can't use speech recognition. It's true that the X10 interfaces and such will not work without a serial port, but the PlainTalk port will. Check it out for yourself at http://www.macspeech.com, where you can download the MacSpeech PlainTalk Enabler, allowing speech recognition on one of the current "unsupported" Mac models. All you need is the enabler, PlainTalk 1.5, and an external microphone, and you're all set. Awesome!—Dan Greuel

We Were Supposed to Do the Right Thing?

I wanted to be the first to congratulate you on giving Mac addicts something with which to defend themselves in the PC war. But there is one thing I'm worried about. What about all the people who *do* know what they're talking about? I am a little worried to be in combat and have a rookie at my side who doesn't know the difference between PRAM and PROM. Are you sure you did the right thing?—Mike Szebenyi

It's Better Than Lentils!

I'm such a big *MacAddict* fan that I designed a cover of my own. I would be honored if it appeared in your magazine or on your Web site. Heck, I'd be tickled if you just told me what you think of it!—Johnny Larocque

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News you can use from WWDC, NAB, TIL, and the usual suspects.

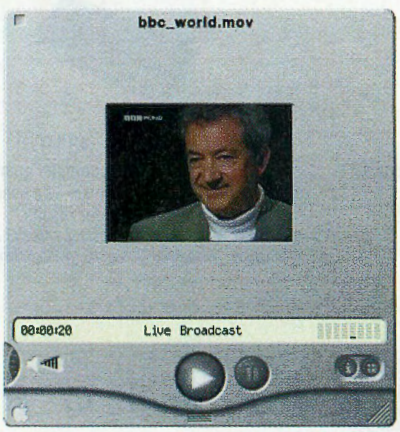
The Quick and the Final

Apple's clever naming doesn't describe its newest software, belatedly in beta

Defying skepticism (at least in the *MacAddict* office) that Apple would ever ship a true streaming version of QuickTime, the company finally announced a public beta release of QuickTime 4.0, complete with—you guessed it—streaming. Thanks to QuickTime 4.0, not only can you watch Web movies without waiting for nasty downloads, but Apple can at last release its new professional QuickTime editing software, Final Cut Pro.

You may remember that Apple purchased Final Cut from Macromedia in May 1998. Apple gave Macworld Expo attendees the first peek at what the company was doing with the video editing and compositing software this past January, and at last officially released version 1.0 (retailing for $999) in April at the National Association of Broadcasters Convention in Las Vegas. At press time, we hadn't seen a copy of Final Cut, but we're certainly looking forward to giving it a good workout.

Final Cut is a combination of video editing and capture software similar to Adobe Premiere, plus some effects tools like Adobe After Effects'. Apple hopes Final Cut will go over particularly big with owners of FireWire-equipped DV cameras and new blue-and-white Power Mac G3s. Apple insists it is only trying to grow a rapidly expanding video editing market, but while video editors may still want Final Cut *and* After Effects, we doubt many will have room for both Final Cut *and* Adobe Premiere. We'll go ahead and dare to say that the latter two products compete.



AT LONG LAST, QuickTime goes live! Tune in today.

As for QuickTime 4.0, Apple may have lagged in bringing the long-promised streaming capabilities to QuickTime, but has made up for it by making streaming easy and affordable. This feature lets someone feed an audio or video signal directly to your screen without requiring that you download the data first, and is essential for doing live broadcasts. QuickTime streaming requires both the familiar QuickTime user software (MoviePlayer—now called QuickTime Player—or the QuickTime browser plug-in) and a streaming server application to feed it data. The $499 Mac OS X Server includes QuickTime Streaming Server software, and a free streaming server is available for Darwin, the open source version of OS X Server (see "Open Season," *Get Info*, Jun/99, p14).

Because Apple used established standards to implement QuickTime streaming, it's possible for other developers to add QuickTime streaming support to their own server software. Both IBM and SGI are already working on this and should make the results available in the next few months. And since Apple has released the source code for Darwin's streaming server, more companies will be able to make third-party QuickTime streaming servers in the future. Once you have your server in hand, to get a QuickTime movie ready for streaming you simply make a "hinted" version of the movie, which you can do in the Save As dialog box from QuickTime 4.0 Pro.

Illustration by Marty Baumann

By making server software readily accessible, Apple hopes to allow QuickTime Streaming to catch up with Real Networks' RealPlayer, the server part of which uses proprietary technology and carries a hefty price. Real Server owners must pay $695 for a package capable of handling 40 simultaneous streams; to match OS X Server's 1,000 concurrent streams would cost a Real Server buyer well over $20,000, and that's not counting additional costs for support. In addition to Apple's aggressive streaming plan for QuickTime 4.0, the public beta also shows off a sleek new interface for our beloved QuickTime player (see *Scrapbook*, p22) and supports Macromedia Flash and MP3 formats.

Apple is showcasing live streaming content from Bloomberg News, HBO, NPR, and BBC World on its Web site at http://www.apple.com/quicktime/showcase/live. Registered users of QuickTime 3 Pro can upgrade to QuickTime 4.0 Pro (the beta for now, and later the real thing) for free. And anyone can get the nonprofessional, bare-bones QuickTime 4.0 beta free at http://www.apple.com/quicktime (it's on The Disc, too).—*RC*

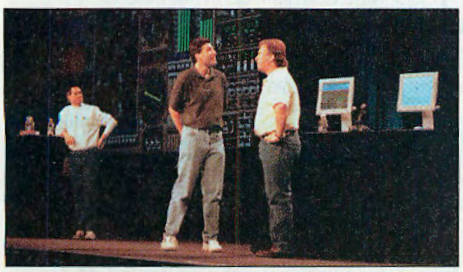
WWDC News Flash

Mac OS Present and Future

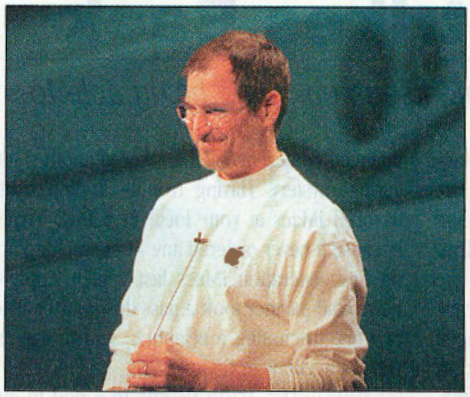
Apple ships free 8.6 update and previews OS X Client

Straddling present and future, Apple used its May Worldwide Developers Conference (WWDC) to introduce both an update to the current Mac OS and a developer preview of the eagerly anticipated Mac OS X Client. Though the release date for the final version of OS X has slipped to early next year, Apple's system software road map is otherwise progressing as promised, giving interim CEO Steve Jobs an opportunity to apologize wryly for the lack of excitement.

The Mac OS 8.6 update, which you'll find on The Disc, is a free maintenance update to OS 8.5. Aside from the usual stability and performance tweaks, it sports improvements to the Sherlock search tool, support for DVD-RAM disks, AppleScript scheduling, scripting commands for Internet file transfers, nanokernel improvements that extend PowerBook battery life, and updates to several other system components (see "What Has Apple Done for Us Lately?"). On the heels of Mac OS 8.6 will come another release, code-named Sonata and slated for the fall. At WWDC, Apple demonstrated just two of Sonata's features—a powerful new version of Sherlock, and a package of multiuser and security features.



JOBS CAVORTS with system software whiz Avie Tevanian and demo dude Phil Schiller.



Photos by Aaron Lauer

WHY IS THIS MAN SMILING? 'Cause his OS plan is working.

After Sonata comes Mac OS X Client, the general-purpose version of Apple's next-generation operating system. In addition to supporting classic Mac OS applications, OS X will run software written for the renovated Carbon toolbox and the erstwhile Yellow Box, now renamed "Cocoa" (since it provides comprehensive Java support). Carbon and Cocoa applications will use a new graphics engine called Quartz, based on Adobe's Portable Document Format. Apple treated WWDC attendees to previews of OS X's new Finder and its Cocoa-based email client, plus a CD-ROM with an early version of OS X Client, but the rest of us have to wait until the year 2000.

In addition to these highlights, Apple gave the audience a sneak preview of its Java 2 virtual machine, released the final version of its OpenGL software, announced that Dragon Systems will port its acclaimed NaturallySpeaking voice-recognition program to the Mac, and demoed QuickTime 4 until everyone's eyeballs were bleeding. If this is boredom, we can deal with it.—*MS*

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What Has Apple Done for Us Lately?

While we were waiting for Mac OS 8.6, Apple quietly updated some of the Mac OS's major components. These upgrades are all rolled into the OS 8.6 update; they're also available separately on The Disc.

Mac OS Runtime for Java 2.1.1 Apple's Java virtual machine has received a substantial speed boost, thanks to Symantec's Just In Time compiler. This release also includes AppleScript support and Sun's Java Foundation Classes, a toolkit for building Mac-like graphical interfaces.

FireWire 2.0 This update to Apple's FireWire software provides better digital video capture with the new blue-and-white Power Mac G3, and supports high-speed FireWire hard drives and printers. This version requires a Power Mac G3 with either built-in FireWire or a FireWire PCI card.

ColorSync 2.6.1 The latest version of Apple's color management software offers better AppleScript support and adds a gray-scale color space profile. The scripting commands and Photoshop plug-ins now support GIF and JPEG file formats as well as TIFF.

Apple Slims PowerBook G3 Series

A year after introducing the sleek but bulky PowerBook G3 Series, Apple has remodeled its laptop Mac to get rid of an extra couple of pounds and almost 1/2 inch of thickness. While the previous model weighed in at 7.8 pounds with a 14.1-inch display, the trim new PowerBook totals just 5.9 pounds complete with CD-ROM drive and battery, to the certain delight of weary mobile Mac addicts.

The changes aren't just external. The new PowerBooks sport Universal Serial Bus ports, 10/100BaseT Ethernet, higher clock speeds (333MHz and 400MHz), and longer battery life (thanks in part to Mac OS 8.6's energy-saving nanokernel, Apple promises you'll get five hours out of each battery). The newcomers use the same ATI Rage LT Pro graphics chip as the last batch, but now pack 8MB of graphics memory. A deluxe 400MHz model with 1MB of level 2 cache, 64MB of RAM, a 6GB hard disk, and a DVD-ROM and DVD Video kit retails for $3,499; the penny-pinching 333MHz version provides 512K of cache, a 4GB hard disk, and a regular CD-ROM drive, all for $2,499.

Eagle-eyed readers will notice there's something missing from the package—FireWire. Newer Technology provides a third-party solution for this—its $249 FireWire 2 Go card works with PowerBook G3 Series models new and old (though the company recommends a 300MHz processor). Look Newer up at http://www.newertech.com or call 316-943-0222. You can also get the usual assortment of storage options, including Zip and SuperDisk drives, from VST Technologies (http://www.vsttech.com or 978-263-9700).—*MS*

Courtesy of Apple Computer. Photo by Hunter Freeman

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The iMac Strikes Back

The little computer that could keeps on...um...being able to

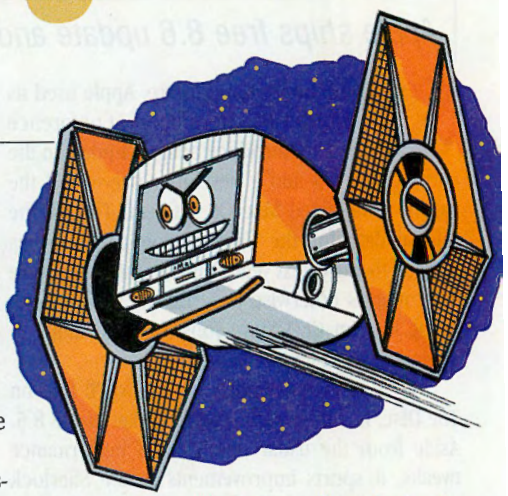

Illustration by Mike Gorman

Psst! Wanna hear a secret? The iMac wasn't Apple's top-selling computer last quarter. The newfangled blue-and-white Power Mac G3 actually outsold the gumdrop consumer Mac, moving 400,000 units to the iMac's 350,000. But judging from press coverage of Apple's now routinely profitable financial results, everyone's still obsessed with the cuddly iMac—and we're no different at *MacAddict*. Here's what's new in the land of fruity flavors.

Speed Boost This April, just three months after bumping the iMac up to 266MHz, Apple phased in a 333MHz model with the same $1,199 price tag. The model change seems to have caused some iMac shortages in the weeks leading up to it, but getting a free 25 percent speed boost every quarter has its upside, too.

Good Buy? Speaking of scarcities, Apple's financial conference call answered another lingering mystery. Having trouble finding fruit-flavored iMacs at your local Best Buy? That's because it never ordered any. After stocking up on first-generation iMacs last winter, Apple's new retail partner took a pass this quarter. The two are discussing a relaunch, and things are still copacetic with CompUSA.

Blueberry Triumphant In a nod to customer color preferences, Apple's doing away with the iMac five-pack (see Apr/99, p14) in favor of an eight-unit set consisting of four blueberry iMacs and one of each of the other colors. The company has no current plans to let retailers order colors à la carte.

Fire? What Fire? Earlier this year we heard reports that Apple had outsourced all iMac production to LG Electronics, whose Mexico plant would take over all production for the Americas. Then came tales of a March 27 fire at the plant, forcing Apple to move production temporarily back to Sacramento, California. (See http://www.appleinvestors.com or http://www.appleinsider.com for details.) For the record, Apple refuses to confirm the LG deal, the factory fire, or the existence of a product named *iMac*.—*MS*

We've Got It **PEG**ged

MacAddict sorts through the swirl of acronymic standards

JPEG, MPEG, This-PEG, That-PEG... what's with all these sound-alike standards? And who comes up with this nonsense, anyway? Clip 'n' save this quickie guide.—*MS*

What's It Called?	What Is It?	What's It For?	What Else Should I Know?
JPEG	Graphics encoding standard devised by the Joint Photographic Experts Group.	Compresses still images by throwing out data, trading file size for image quality.	Has corresponding file formats (JFIF and SPIFF), but you can also apply JPEG compression to the contents of other file formats.
M-JPEG (Motion-JPEG)	Not a standard, just a cool-sounding name for applying JPEG compression to video sequences.	Compresses video on a frame-by-frame basis.	Has several incompatible versions, including the one Apple's QuickTime supports.
PhotoJPEG	Image file format used only on Macs.	Packages JPEG-compressed data inside a PICT file format.	JPEG-compressed TIFF files are probably a better way to go; after all, they're cross platform.
MPEG-1	First in a series of audio-video compression standards from the Moving Pictures Experts Group.	Designed for use on interactive CD-ROMs.	MPEG-1 Audio Layer III format, popularly known as MP3, belongs to this standard.
MPEG-2	Second audio-video compression standard from the MPEG brain trust.	Designed for digital television. Also used for DVD movies.	Generally requires dedicated hardware (such as the DVD decoder cards for the PowerBook G3 and Power Mac G3) for decompression.
MPEG-3	MPEG standard that never made it out of the planning stage.	Originally intended for use in High Definition Television (HDTV).	Ultimately discarded in favor of MPEG-2, which works just as well for HDTV.
MPEG-4	Super multimedia standard the MPEG team is finalizing.	Intended for HDTV, the World Wide Web, and interactive graphics applications.	The MPEG-4 specification has adopted Apple's QuickTime file format.
Mumblety-PEG	Diverting pastime for children of all ages.	Enables you to toss sharp objects at the ground and see if they stick.	A workable approximation of the standards process.

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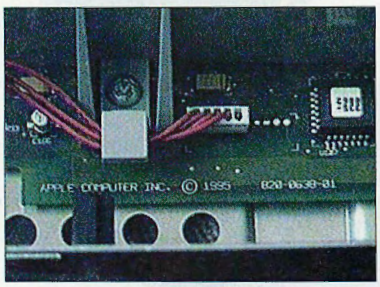
Whacked Mac Thing

Prototype proves Apple had some sense

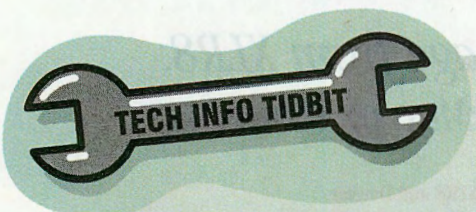
An online auction house offered proof that Apple knew enough during the mid-1990s to stay away from one questionable money-sucking technology—the set-top box. Chris Wilson bought a

mysterious black box from an estate auction in Sunnyvale, California, and decided to sell it on eBay. He received over 350 email queries asking what the device was, and 35 bidders pushed the final selling price up to $1,025.

Powered by a 68LC040 processor, the mystery box came with several video ports, and the board was burned



in May of 1995—even before Gil Amelio took up residence at Apple. The PowerBook Zone (http://www.pbzone.com) traced the FCC identifier on the unit to find it registered as an MPEG interactive TV unit. Further spelunking by MacInTouch (http://www.macintouch.com) revealed that the set-top box prototype was likely created for BT Interactive TV, a video-on-demand service from British Telecom.—*DR*



Tasty morsels culled from Apple's Tech Info Library

Having trouble with error type 41? The most likely explanation for this error, which means the Finder can't load, is that the Finder file itself has become corrupt. (Low-level gamma rays emanating from a coworker's body are a distant second explanation.) To fix this, you'll need to reinstall the Finder from your system software disks. This is a bit simpler than it sounds—you merely start up from your system software disk, remove the corrupt Finder from your hard drive, and do a simple reinstall of the base system.

Speaking of system installations, the Tech Info Library has some information about when to do a clean install—that folkloric cure-all often talked about as a final troubleshooting step for crashes. Apple recommends first starting up from another drive with a System Folder on it, then trying to reproduce the symptoms you're experiencing (by starting up, running a crash-prone program, and so on). If you can't reproduce the problem, then you may very well have a corrupt system. That's the time to do a clean install. The problems you may resolve include:

- Crashes when you start up your Mac, even with extensions off;
- Crashes in a particular program (this also may be a buggy application);
- Random crashes;
- Crashes during system installation;
- A flashing question mark on startup.

Finally, remember that clean installations are not toys. Metaphorically speaking, you should treat them with the same respect you'd give a dry-cleaning bag, which may cause suffocation if placed over your head.—*DR*

All information in this article comes from Apple's Tech Info Library, the very same resource Apple's tech support people use. Visit http://til.info.apple.com and learn something new today!

The MacAddict Index

Number of Power Mac G3s sold between November 10, 1997, and March 27, 1999: 1.8 million[1]

Number of Power Mac and PowerPC upgrade cards sold between March 14, 1994, and June 30, 1995: 2 million[1]

Number of iMacs sold between August 15, 1998, and March 27, 1999: 1.15 million[1]

Installed base of Apple II as of December 1983: 1.3 million[2]

FOCUS ON: INTERNET OVERLOAD

Downloads of *Star Wars Episode I: The Phantom Menace* trailer from Apple's site between March 11 and April 14, 1999: more than 8 million[1]

Average click-through rate of a Web banner ad in February 1999: 0.15 percent[3]

Number of 25,500 standard dictionary words not yet registered as .com domains: 1,760[4]

Ranking of http://www.well.com among the most popular Web sites as of January 1996: 10[5]

Ranking of http://www.well.com among most popular Web sites as of January 1999: 1,143[5]

FOCUS ON: DEATH OF THE PC

Compaq's first-quarter earnings per share, according to analyst estimates: 31 cents[6]

Compaq's first-quarter earnings per share, according to the company's preliminary financial results: 15 cents[7]

Length of time between Compaq's preliminary earnings announcement and resignation of CEO Eckhard Pfeiffer: 9 days

Revenue IBM's personal computer business generated in 1998: $12.8 billion[8]

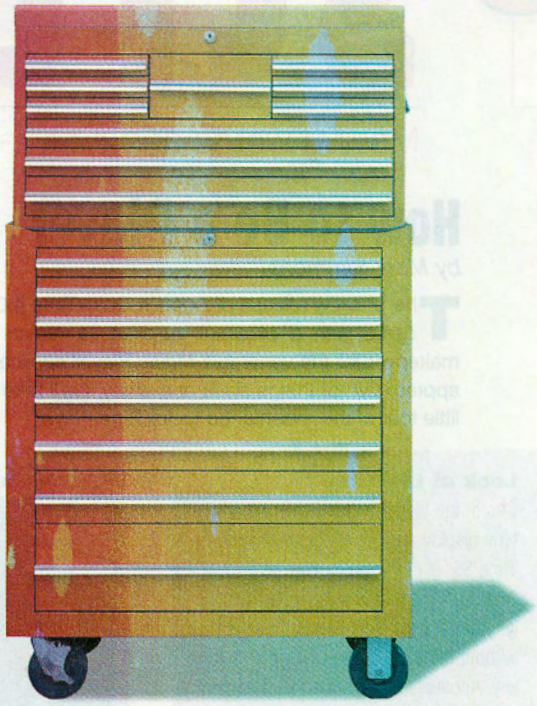
Net loss of IBM's personal computer business in 1998: $992 million[8]

Amount IBM plans to spend to make its own computer systems Year 2000–ready: $575 million[8]

1 Source: Apple Computer 2 Source: InfoCorp
3 Source: Nielsen Media Research 4 Source: Wired News
5 Source: Media Metrix 6 Source: First Call
7 Source: Compaq 8 Source: IBM

If this is Norton™...

This is TechTool® Pro:



When your Macintosh computer is not operating correctly, having the right tool to find and fix the problem is important. And as any technician will tell you, you can never have too many tools. TechTool Pro 2 checks more aspects of your Macintosh than any other utility available. Besides repairing and recovering damaged drives (including those with the new HFS+ format), you can also test all those other critical parts of your system that our famous competitor ignores like RAM, CPU, floppy drives, scanners, modems, Internet connections, CD-ROM drives and much, much more.

But just because TechTool Pro is the most advanced Macintosh troubleshooting utility available doesn't mean that it's difficult to use. In fact, we've added an easy-to-use interface that makes checking and fixing your Macintosh a snap. For the advanced user, our expert mode allows you to control and configure TechTool Pro in almost any way you wish.

So if your Macintosh troubles are getting you down, check out TechTool Pro. After all, you have the most powerful computer in the world. Shouldn't you be using the most powerful utility?

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scrapbook

Moving words and pictures du jour.

How to Be a Player

by Mark Simmons

The preview release of Apple's QuickTime 4.0 software came with a pleasant surprise—a radical interface makeover for the venerable Movie Player application. Ever appreciative of things sleek and shiny, we'll take you for a little tour of the refashioned QuickTime Player.

Look, Mom, No Title Bar!

We know Apple's hardware styling these days runs to translucent plastics and candy colors, but its software design is getting more whimsical as well. Like Apple's DVD software controller, QuickTime Player's window sports metallic colors, rounded corners, and lots of slide-out gadgetry. Human interface standards be damned—wouldn't you rather have an interface that matches your stereo?

Look at the Time

One of the biggest changes is the new time display area. A diamond-shaped Time Slider replaces the classic "thumb," and handy selection markers let you set your start and end points without fumbling around with the shift key. Apple also threw in an audio output display, just for the heck of it.

Don't Discount the Volume

The wheel-style volume control looks clever, but it's actually kind of a pain to operate. Try clicking the volume display to the right of the bullhorn icon instead; the volume adjusts to the point where you click.

For Control Freaks

When you register QuickTime Player, you get an extra slide-out tab with an assortment of bonus controls. Balance, bass, and treble are nothing to sneeze at, but it's tough to beat the bizarro fast rewind function.

Playing Favorites

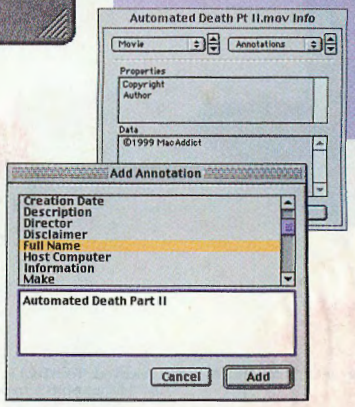
As if taking a page from the MacAmp playbook, Apple appended a slide-out Favorites tray to the bottom of the player window. You can add open files with a menu command, or drag 'em into a slot in the tray. If your movie has a poster frame, that appears instead of a generic icon. But since the tray doesn't display file names, you may find the Favorites menu a more convenient launching mechanism. (Your author swears that he generated all the listed MP3 files from his very own CD collection.)

What's Online?

To be sure, there's no limit to how many times you can watch Rob's directorial debut. But if you're looking for something new to eyeball, Apple will happily direct you to http://www.apple.com/quicktime/showcase to scope out a selection of movie trailers, streaming video servers, music videos, and whatnot. Our hot pick: a QuickTime VR tour of a World War II submarine, at http://www.zeitraum.com/_submarine/index.htm. Das Boot-up!

For Your Information

The Information button displays up to three lines of annotations, which can include copyright information, a full title, author and director names, album and track data, and much, much more. To edit a movie's information, choose Get Info from QuickTime Player's Movie menu, select Annotations from the pop-up menu in the upper right corner of the Info window, and add the desired tidbits.



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no crash

CRASHP YOUR MAC

...and learn to deal when disaster strikes!

ILLUSTRATION BY HARRY CAMPBELL

ROoF

by Nikki Echler

Is your Mac driving you crazy or are you driving your Mac crazy? Think about it. You stuff your Mac full of sketchy shareware and bloated applications, subject it to a mixed bag of peripherals, and toy with its settings. You inflict a distended extensions folder upon it and then infect it with viruses. You even let it run around wearing last year's system software. It's no surprise your Mac is one corrupt extension away from a complete mental breakdown.

Don't blame the victim when the big one hits—take crash precautions now. We've got the tips and tools you need to destress your System Folder and crashproof your Mac. Of course, we know you can't completely protect your Mac against crashes, but following our therapeutic advice should lower the odds that they'll happen to you.

In addition to showing you how to shield your Mac from crashes, we'll tell you how to investigate its bomb threats and root out their real causes—whether it's a bad extension, a dead battery, or a corrupt disk drive. We'll also tell you how to cope in the event of a crash, and supply you with enough do's and don'ts to get you through the very worst sad Macs, blinking question marks, and gray screens of doom. One hint—we don't recommend hiding in the basement until the problem goes away. We tried it. It doesn't work.

Spare Yourself

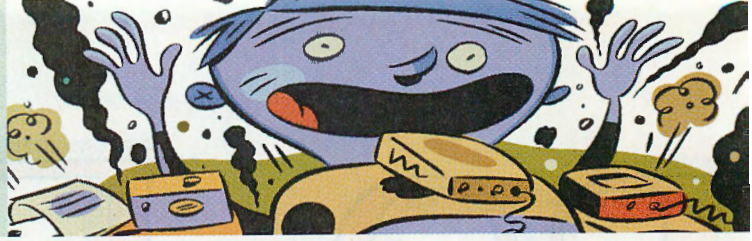
In cases of extreme emergency it's always handy to have a spare, whether that's a tire, extra cash, an understudy, or a bootable CD complete with an extra System Folder and tons of useful utilities. Should your Mac ever fall upon hard times, you'd be wise to have a bootable emergency disk stocked with the following shareware and commercial programs.

On The Disc

- **Tech Tool 1.1.8**—Good for zapping PRAM and rebuilding desktops
- **Agax 1.1**—Virus protection
- **WormScanner 2.3**—AutoStart worm protection
- **Disk First Aid 8.2**—General hard drive fix-it utility
- **Apple Drive Setup 1.7.2**—Initializes drives, updates drivers
- **SCSIProbe 5.1.1**—Helps with stubborn SCSI drives
- **Apple System Profiler 2.1.2**—Gives you all the info you'll ever need about your Mac
- **Conflict Catcher 8.0.4 demo**—Helps with extension conflicts (and lots of other things)
- **AppWatcher Lite 1.0**—Use it to quit *any* application running on your Mac (even the Finder)
- **Clean-Install Assistant 1.1**—Makes clean installs less painful
- **Data Rescue 2.1.1**—Helps you get lost files back
- **FontAgent 2.7.5**—Provides help with managing fonts
- **InformINIT 8.1**—Tons of info on almost every extension
- **Trash Desktop 1.2.1**—Rebuilds your desktop
- **Search and Rescue 1.0**—Text-recovery program
- **Substitute 1.7.5**—General maintenance utility

Recommended, but not on The Disc

A System Folder—Well, duh!
Hard Disk Toolkit—Great for mounting balky drives and creating RAID setups



no crash

Healing Your Inner Mac

Aromatherapy and keyboard massages probably won't do much to relieve the inner stress that's making your Mac crash. You're better off following our 10 surefire stress-relieving techniques.

1 Make backing up a habit unless you don't mind us saying "I told you so" when you lose all your work in the next big crash. You might try using Retrospect Express ($49.95, 925-253-3000, http://www.dantz.com) to help you make faster, smarter storage decisions.

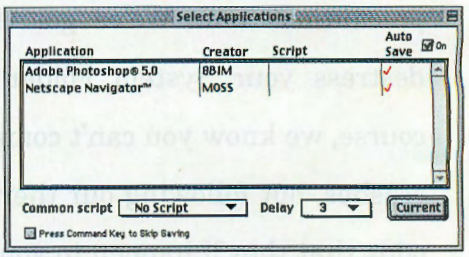
2 Don't use desktop printing—especially if you're using Mac OS 8.5. Apple openly admits that Mac OS 8.5 and the desktop printing extension work together about as well as Bill Clinton and Kenneth Starr. Desktop printing is generally more trouble than it's worth anyway.

3 Rebuild your desktop on a monthly basis by holding down the Command and Option keys at startup or by using TechTool (freeware, http://www.micromat.com) for a deeper cleaning. This can clear up problems you might be having with freaky icons, disoriented aliases, missing files, and other items stored in your invisible desktop file. (Be sure to turn off extensions while doing this.)

JUST CLICK REBUILD to reconstruct your desktop using the TechTool freeware utility.

4 We can't stress enough how important it is to have a virus-busting program on your Mac—and to use it regularly. You can download the freeware Agax (http://www.download.com) for protection until you get a chance to install Symantec's more full-featured Norton AntiVirus ($69.95, 800-745-6054, http://www.symantec.com). Use it once a month or more often, depending on the severity of your shareware fetish. Also, update it frequently—head back to Symantec's Web site and download new virus definitions. If you're just looking to get rid of an unpleasant AutoStart Worm infection, try WormScanner, which you'll find on The Disc.

5 Use a utility such as AutoSave ($15; http://www.buzzmac.com) to save documents periodically. Or if you're using Microsoft Word, select Preferences from your Tools menu and choose Save. Click to enable AutoRecovery and set its time frame to a schedule that makes you comfortable—we've got ours set to rescue every five minutes. These precautions are especially useful if the only time you remember to save your work is after it's gone.



CLICK A BLANK LINE under Application to add a new app to the list—AutoSave saves it for you.

Behavioral Therapy

Your Mac hasn't died, but you almost wish it would—its multiple crashes and software schizophrenia are starting to make you crazy. If you don't know what's wrong but need to put a stop to the madness, follow this unpatented but highly effective seven-step tune-up from *MacAddict* editor and chief troubleshooter Dave Reynolds to cure what ails your Mac.

1 Do a low-level format using the latest version of Apple's Hard Disk Setup to clean out your grungy drive thoroughly. Update the disk driver while you're at it.

2 Use TechTool to zap your PRAM. Command-Option-P-R is fine for monthly maintenance, but when you're trying to mend fences you need to be thorough.

3 Perform a clean installation of the most recent system software that will work on your machine.

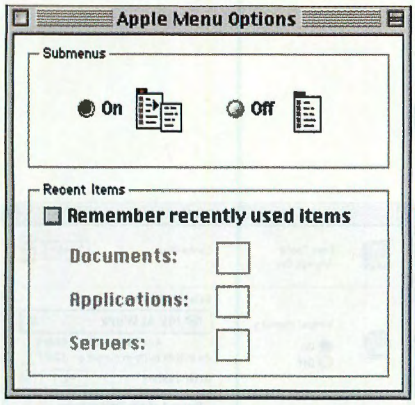
4 Update all your drivers, whether they're for your scanner, printer, or Mac-powered pencil sharpener.

5 Install all applications (and fonts) from their original discs and update them all to the latest versions.

6 To reduce the risk of recontaminating your clean system, copy over only the important files you need.

7 Use TechTool to rebuild your desktop with extensions off.

6 Get rid of Apple Menu Options and its preferences. Notoriously buggy, this Control Panel can cause system crashes and universal system slowdowns, among other annoyances. A more efficient way of getting your Apple Menu in order is BeHierarchic ($10, http://www.shareware.com). This utility lets you group your Apple menu items into folders and then separate them with dividers. It also lets you use custom icons to make menu items recognizable.

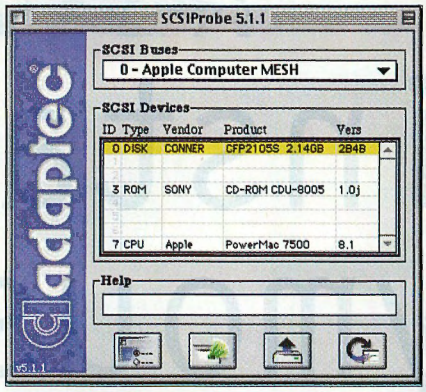


APPLE MENU OPTIONS. What is it good for? Absolutely nothing! Say it again!

7 Fend off SCSI conflicts by terminating each end of your SCSI chain. Your Mac takes care of the internal end, but you're responsible for putting a cap on the last external link on the SCSI chain. Many newer SCSI devices come with a built-in termination solution that merely requires flipping the right switch. However, older devices and even some newer ones require a terminating resister that you just slap on the back. Always terminate the final SCSI device in a chain. IDE, USB, and FireWire devices do not need termination.

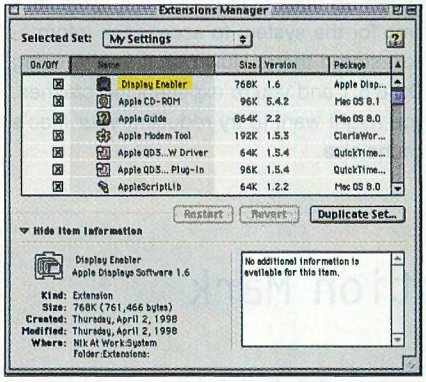
8 Make sure all SCSI devices have their own ID number by using Adaptec's freeware SCSIProbe to get a list of what's what. If your internal hard disk is a SCSI drive, it generally gets assigned the default SCSI ID number 0. However, since 1994 some Macs have shipped with IDE hard drives, which don't play the SCSI number game and consequently don't identify themselves with numbers.

If you fire up SCSIProbe and your hard drive doesn't show up, that probably means you've got an IDE drive. Don't worry about it, but do check your other SCSI devices to make sure they're not suffering from a number identity crisis. Your Mac almost always takes number 7, and your CD-ROM drive responds to 3, which leaves 1, 2, 4, 5, and 6 up for grabs. If you're using USB or FireWire peripherals with your iMac or your new G3 tower, you won't even have to deal with this problem.



SCSIPROBE FINDS DEVICES with double identities, which could cause SCSI conflicts.

9 Take a mower to overgrown extensions. Conflicting or corrupted extensions often cause startup crashes and odd freezes. Do a quick trim by choosing the Extensions Manager Control Panel from the Apple menu and turning off all unnecessary items. If you don't know what an extension does, highlight it and click Show Item Information. If you don't get much info, download Dan Frakes' $15 shareware manual InformINIT from http://mc04.equinox.net/informinit for the dirt on almost every extension, plus tips and tricks.



SOMETIMES NO NEWS is good news, but sometimes no news is just no news.

10 Update your software. New software versions and updates often fix bugs, as well as offer new features. If you're updating your system software or performing a clean install, back up important files and turn off file sharing and virtual memory. When it's time to merge your new system with the old one's customized preferences and vital files, the freeware Clean-Install Assistant (http://www.marcmoini.com) figures out which files to keep and which ones to ditch. If you've got Conflict Catcher 8 installed, you can also use that to merge the two systems safely.

TRAUMA CENTER

The Gray Screen of Doom

Every time you turn on your Mac, it runs through a self-test to verify that all its components are in working order. If anything has gone awry, your Mac may get stuck here and leave you staring at a gray screen. Here's what to do.

DO check for SCSI conflicts by powering down your Mac, unplugging all your SCSI devices, and then plugging them back in one by one. When you've fingered the bad guy by process of elimination, update its drivers and give it a second chance.

DO try zapping your PRAM if your Mac isn't SCSI conflicted. Hold down Command-Option-P-R until you hear the Mac chime four or five times to get the best zap, or use a program like TechTool or Zap for a more thorough cleansing.

DON'T zap the PRAM with any kind of electrical device or with real or imagined magical powers. These methods are highly ineffective.

DO reset the motherboard battery if zapping the PRAM proves to be a wash. Open your Mac case, pull out the motherboard battery, press the reset button, and put the battery back.

DON'T reset anything else on your motherboard just because you're in there and you're thinking, "Heck, why not?"

DO replace your battery if resetting it on the motherboard isn't enough. You can do it yourself or send it to the shop and let someone else do the dirty work for you.

DON'T feel bad if you can't solve the problem—get professional help. We won't make fun of you. Really, we won't!

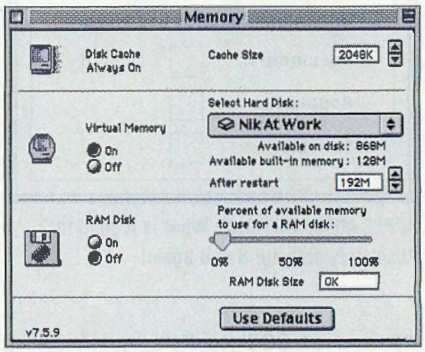
no crash

Overinstallers Anonymous

You've got a thing for mouse pads; you can't quit installing screensavers; your SCSI chain now extends to Montana—whatever your addiction is, you've got it bad. For all of you overinstallers who are ready to admit that you have a problem, we have some helpful advice to spur your recovery.

1 Use restraint when installing *anything*. The more apps, extensions, and preferences you put together in one place, the more likely it is that a fight will break out or a virus will spread among them. Also, when one goes bad, it's a lot harder to weed it out from the nonoffenders—especially when you go on a spree and install a bunch of stuff at once.

2 Set virtual memory to 1.5 times the amount of RAM you have, as some startup problems result from not having enough memory to load all of your cumbersome extensions. It's a good idea to turn on virtual memory anyway if you have a Power Macintosh, since its file-mapping system exploits virtual memory by making apps a couple of megabytes lighter to load. Turn off virtual memory when using audio or video programs because it slows real-time processing, which is vital for that kind of work. (Virtual memory uses the disk as memory, but the Mac reads from disk much more slowly than it reads from real RAM.) As for your disk cache, keeping it on can speed up your Mac because it takes less time for the system to access the information stored there. However, if you're using OS 8.5.1 and you're experiencing crashes, you might want to try reducing your Mac's cache size.



YOU SHOULD SET VIRTUAL MEMORY to 1.5 times your actual amount of RAM.

3 Download shareware onto a drive other than your main startup drive. You can think of this extra drive as being like the air-locked containment bay on space ships that's used to dock unknown and potentially

TRAUMA CENTER

The Blinking Question Mark

If your Mac starts up, but instead of the smiling happy Mac all you see is a disc icon with a blinking question mark on it, your Mac is having a hard time finding its startup drive. To find the answer to the question:

DO check to see that your external drive is connected, plugged in, and turned on (if you're using it as your startup drive).

DO try restarting your machine with the time-tested Command-Control-Power key combo. If you get your drive to show up, restart using your emergency disk and perform Disk First Aid on the damaged drive. While you're at it, update your drivers, too.

DON'T deteriorate into swearing if that method doesn't work. It really doesn't help. And it might scare people.

DO restart from your system CD by either holding down Command-Shift-Option-Delete or holding down the C key after you hear the startup chime.

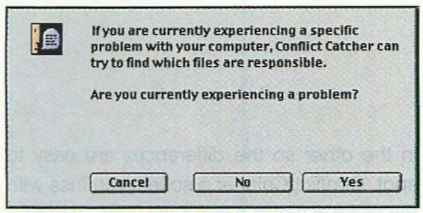
DO "rebless" your hard drive if it appears on the desktop by going to your System Folder and opening and closing your system file. Then restart your Mac and follow all the necessary postcrash repairs with Disk First Aid.

DON'T freak out if your hard drive doesn't show up on your desktop when you restart. Instead, use SCSI Probe (which should be on your emergency disc) to attempt to mount your main startup drive.

DO use Disk First Aid, Norton Disk Doctor, or Micromat's TechTool Pro to track down the errant drive, negotiate its return to your desktop, and eventually rehabilitate the sucker if SCSI Probe lets you down.

unfriendly ships. Hose off the app with an updated virus program before letting it mix with the natives.

4 If your gluttonous habit of installing everything in sight results in unexplained crashes and you don't know where to pin the blame, Casady & Greene's Conflict Catcher will point the finger for you. Open up Conflict Catcher, click the Conflict Test button, and the program walks you through an extensive conflict-testing procedure.



WHAT'S YOUR PROBLEM? Conflict Catcher figures it out.

5 Don't touch your Mac's private parts unless Apple gives you permission. In other words, if you're jonesing for speed and overclock your Mac, if you're craving iMac colors for your 7200 and paint it, or if you do almost anything else we showed you in our February "Pirate" issue, your Mac is more likely to suffer from crazy crashes than before you messed with it. And frankly, my dears, Apple won't give a damn, because you will have voided your warranty.

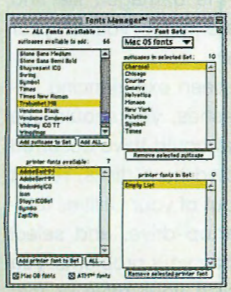
6 Don't mix the old with the new. Although combining your new Gap skirt with a supercool thrift-store sweater set may make for a knockout ensemble, a similar policy when dealing with your Mac could just knock it out—period. Haphazardly installing new apps on an outdated system, setting old SCSI devices on the same bus as new Ultra2 SCSI devices, and forcing different generations of applications and peripherals to rub shoulders could cause your Mac to slow down or shut down in protest.

7 Trim the fat where you can. If you have no willpower and keep stockpiling your hard drive with every app that meets your eye, at least try to keep your system as clean as possible to make room for them all. Get rid of old apps, drivers, files, and preferences. For extra help cutting back on FAT, Substitute 1.7.5 ($10; http://www.geocities.com/siliconvalley/network/7162/) will remove the extra code from FAT apps and optimize folders and disks. It also performs a grab bag of other useful tasks that include rebuilding your desktop and restarting your Mac.

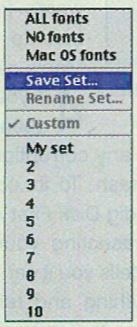
8 If you insist on installing tons of fonts, at least use a font management program like Adobe's ATM Deluxe 4.5 ($99, http://www.adobe.com), Extensis's Suitcase 8 ($89.95, 877-813-5810, http://www.extensis.com), or the $10 shareware utility Fonts Manager (http://www.aedvantage.com/indexmain.html) to create sets of fonts that you can turn off when you don't need them. This not only makes your Mac boot faster, but shortens your search if you have a bad one in the bunch. You might also want to get Insider Software's FontAgent ($39.95, 800-700-6340, http://www.insidersoftware.com) for quick fixes of corrupt fonts. The company makes the bold statement "Run FontAgent and you'll never have a font-related crash again." Try it for yourself and see if that's true.

It's a Font Setup

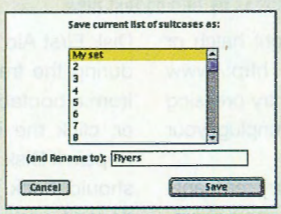
If you're out to set a world record by stuffing as many fonts as you can into one System Folder, you'll need to get around the Mac's limitation of 128 font suitcases. Mess with the maximum and you'll likely experience weird system woes. However, you can sneak through the loophole by creating sets of fonts and storing the ones you're not using outside the Fonts folder. Here's how to create a font set if you're using Fonts Manager:



1. SELECT A FONT from your All Fonts Available list and click Add Suitcase To Set.



2. SELECT SAVE SET from the Sets menu.



3. NAME YOUR SET or rename an old set, and you're all done!

TRAUMA CENTER

The Sad Mac

Not even the tears of a clown can bring on the overwhelming sense of sadness you'll experience when your Mac puts on its sad face. More poignant than your average error message, the sad Mac could mean that you have a serious software or hardware problem, depending on when it appears in the startup sequence.

If you see the sad Mac after the happy Mac and your friendly Welcome To Macintosh greeting, odds are that you have a system software problem.

DO try starting up from your emergency disk or an alternative drive. If you start up just fine, you probably have a software situation.

DON'T call the cops. It's not that kind of situation.

DO try running our "Behavioral Therapy" program on page 28.

If a sad Mac appears immediately upon startup, you likely have a hardware problem such as a bum logic board, bad memory, or damaged drive.

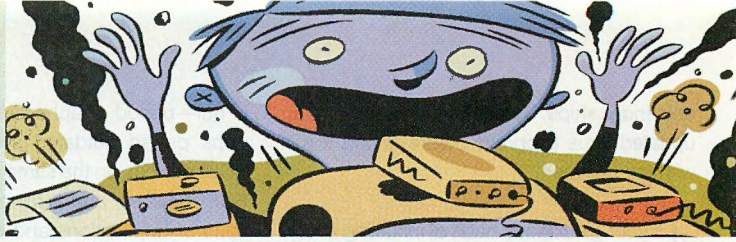
DO try starting up from your emergency disk and running through our seven-step tuneup just to make sure it's not a software issue.

DO give your hardware a once-over if that doesn't help.

DON'T give your hardware a workover—we don't want any injuries.

DO make sure any RAM or card you've installed is compatible with your system and firmly seated.

DO check for SCSI conflicts by disconnecting SCSI devices and restarting your Mac. If it restarts just fine, find the guilty one through a process of elimination, and try replacing its cables as well as its drivers.



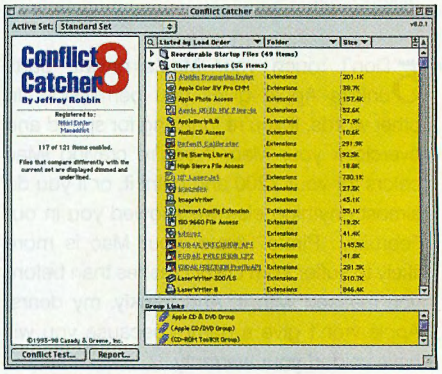
no crash

Dealing with Disaster

Let's face it, no matter how much you coddle your Mac, no matter how much love you shower upon it, a crash is looming somewhere in your future. It may be one big, bad crash or it may be multiple, smaller crashes. Or your Mac may seem to suffer from an indecipherable malaise. Here are some tips to keep you going when the going gets tough.

1 If you are experiencing recurrent freezes and startup woes, you may have an extension conflict. Try restarting your machine with extensions off by holding down the space bar until the Extension Manager control panel opens. When it does, open My Settings, turn off half of your extensions, and restart your computer with these extensions off. If you still experience problems, look for the corrupt extension in the set you left turned on. If you don't experience problems, you'll find the troubled extension in the other set. Turn off half of the remaining set containing the guilty party and restart your Mac again. Keep doing this until you've weeded out the troublemaker. When you find this extension, turn it off or drag it to the Trash. Delete the software to which it belongs with a utility such as Aladdin's Spring Cleaning, then reinstall the program from scratch.

2 An easier, though more expensive, way of keeping track of your extensions is via Casady & Greene's Conflict Catcher ($79.95, 800-359-4920, http://www.casadyg.com). Conflict Catcher does everything the Extensions Manager does, but better. For example, if you want to compare your Mac's base extension set with your personal extension set, Conflict Catcher highlights one set within the other so the differences are easy to spot. Conflict Catcher also lets you fuss with the order in which extensions load—a potential cure for some types of crashes.



IF YOU'RE TRYING TO FIND an offensive extension, Conflict Catcher can help by comparing the base set with your personal set.

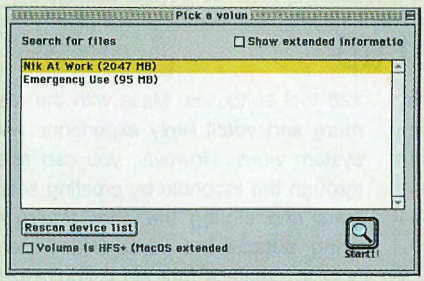
Not-Quite-12-Step Crash Recovery Program

Your Mac just crashed and now you're in damage control mode. Minimize the aftershocks by doing the following:

1 Don't panic and don't succumb to Mac rage. Primal screaming doesn't really help. You'll need a clear head to investigate the problem.

2 Try force-quitting your stubborn application. If you're locked in a freeze and can't move your mouse, press Command-Control-Power to restart. If that doesn't work (and if you own an iMac, it won't), press the reset button—iMac owners must stick a paper clip in the reset hole hidden on the right hatch or purchase the iMac Reset Button for $9.95 at http://www.imacresetbutton.com. PowerBook G3 owners should try pressing Shift-Function-Control-Power. If none of that works, unplug your Mac and restart after 30 seconds.

3 Once you've restarted, try checking the Trash for any remnants of your work the crash might have spared. You can use a shareware program called Data Rescue ($39, http://www.wildbits.com/rescue) to recover files and folders lost to a crash. If you're searching through the rubble for a particular text file, Search and Rescue 1.0 ($10; http://www.kagi.com/tjriley) may also help you recover lost valuables. This utility looks for specific words from the damaged file and tries to locate it for you in your Mac's memory.



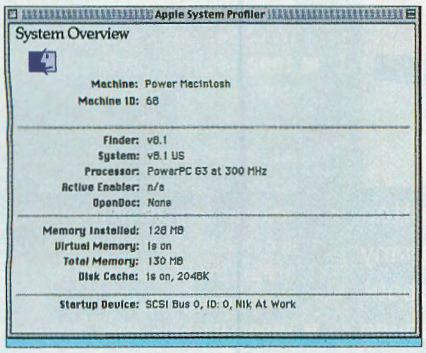
DATA RESCUE CAN HELP YOU through postcrash distress by finding lost files.

4 If you've been experiencing frequent crashes, you should use Disk First Aid to repair any corruption that could have occurred during the freeze or crash. To fix corrupted hard disks, restart from a bootable drive, dig Disk First Aid out of your Utilities folder, click the icon representing your startup drive, and select Repair. If Disk First Aid tells you it can't repair your problems, you should back up everything and reinitialize your drive. If that doesn't work, you'll have to send your drive back to the mother ship for more serious repairs.

3 Don't give up on the first try. Whether you're merely restarting, rebuilding the desktop, or performing a low-level format on your hard disk, you should try each measure multiple times. It might sound a tad obsessive-compulsive, but occasionally it works, and it still takes less time than sending your Mac back to Apple for an overnight stay.

4 Check out MacFixIt, the ultimate Mac repair site, at http://www.macfixit.com. Ted Landau's Web site is the best place to check for known compatibility problems before installing anything on your Mac. It's also the best place on the Web to go for troubleshooting advice and support. Off the Web, of course, the ultimate guide for Mac health problems is Landau's book, *Sad Macs, Bombs, and Other Disasters,* from Peachpit Press. Buy it. Now. You'll thank us later.

5 Speaking of calling the help desk, Apple recommends that you have the following info on hand before dialing SOS: the make and model of your Mac, what you were doing when you crashed, what peripherals and apps you were using, what system you're running, and what exactly happened when the ship went down. If you can, you might also want to run Apple System Profiler for a quick rundown of your Mac's vitals, which the help desk is sure to ask you about.



The Apple System Profiler knows all...

6 Take note of your error messages when you crash, then consult MacErrors ($10 shareware, download at http://www.macfixit.com) to find out what they mean. The program hasn't been updated since 1995, but it's still kind of fun to use in a weird magic-eight-ball kind of way. You can also browse Apple's online Tech Info Library for the latest guide to Mac errors (http://til.info.apple.com/techinfo.nsf/artnum/n1749). It's decidedly less fun, but it may prove useful if you get one of those nasty errors and have to call the Apple help desk for a little TLC.

Remember those Type 11 errors? Ahhhh, the memories...

7 Use the latest drivers—and we're not talking about expensive clubs for the back nine. Drivers are the means by which your hard disk and peripherals communicate with your computer. If the drivers are corrupt or outdated, you could experience crashes, or your peripherals might not work at all.

If you're updating hard disk drivers, you'll want to start up your Mac from a different drive than the one you use as your startup disk. If you don't have an extra drive, then start up from a bootable CD. Your Mac OS installation CD will do nicely.

Use the most recent version of Apple's Drive Setup software, which you should find in your Utilities folder, to update your drivers. Just select your hard drive, choose Update Drivers from the Function menu, and you're done. (Don't click Initialize or you'll erase everything on your drive like a bad memory.)

If Drive Setup doesn't support your drive, you'll have to get your hands on a drive formatting utility, such as Hard Disk Toolkit by FWB Software ($125, 800-581-4392, http://www.fwb.com). If your hard drive needs newer drivers than what you have on your disk, you'll have to go to the Web and download the latest. The same goes for any drivers you might need for third-party peripherals.

8 Do a low-level format when updating your disk drivers doesn't solve your problems. First back up all the information from your hard disk onto a different drive, because you're about to erase your original drive. Now restart from your original CD and use Drive Setup to initialize your drive. If initialization doesn't work, choose Initialization Options from the Functions menu, then click Low Level Format. If this doesn't help, you probably have a hardware problem, which means you'll need to get on the horn with the help desk at Apple.

Executive Editor Nikki Echler wonders why no one's ever invented Fix-a-Mac in a can for true Mac emergencies.

TRAUMA CENTER

The Dead Mac

The only time a sad Mac seems reassuring is when you compare it with the dead Mac, which refuses to start up at all. If you press Power and nothing happens:

DON'T panic.

DO check to see if everything is plugged in and turned on, including your monitor.

DON'T start to cry unless it makes you feel better.

DO check all of your cables by swapping them out one by one and replacing them with new cables.

DO replace the battery on your logic board.

DON'T replace it with a double-A battery. Get the right-size battery for your motherboard.

DO try removing your internal hard drive, swapping in a hard drive you know is working, and restarting.

DO take your Mac to a repair center if these steps don't fix your problem.

DON'T give up if your Mac looks like this:

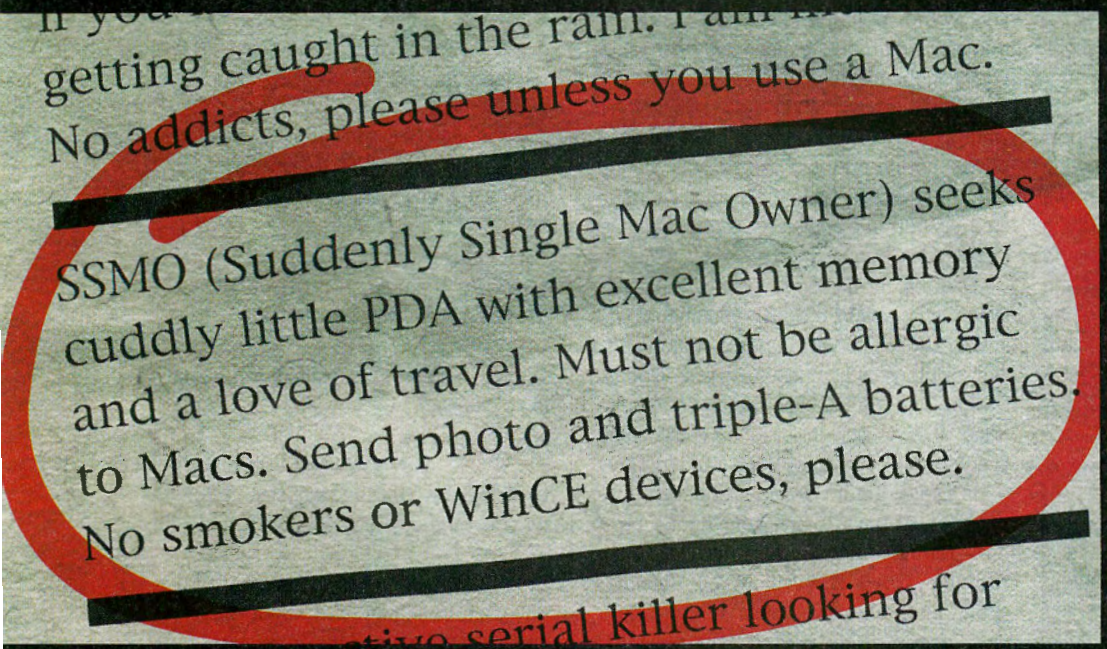
If your Mac's data *really* means a lot to you—we're talking thousands of dollars—take it to DriveSavers (800-440-1904, http://www.drivesavers.com) for serious damage control.

palm

Learning to Love Again

BY JOSEPH HOLMES

3Com's Palm Pilot can fill that PDA gap.



Your tears have dried; you no longer wear black. Finally, you've gotten over the loss of your beloved Newton MessagePad—killed, as so many are, not by a stranger but by a friend. Yes, you're ready to think about a new companion. Matchmakers that we are, we'd like to introduce you to a favorite friend of ours—the 3Com Palm (408-326-9000, http://www.palm.com).

Of course, the Palm isn't as deep or rich as your old flame—but really, you must stop comparing everyone with your ex. The Palm has its own unique appeal—it's thinner, lighter, more popular, and you two will go everywhere together. People may even whisper that you're attached at the hip.

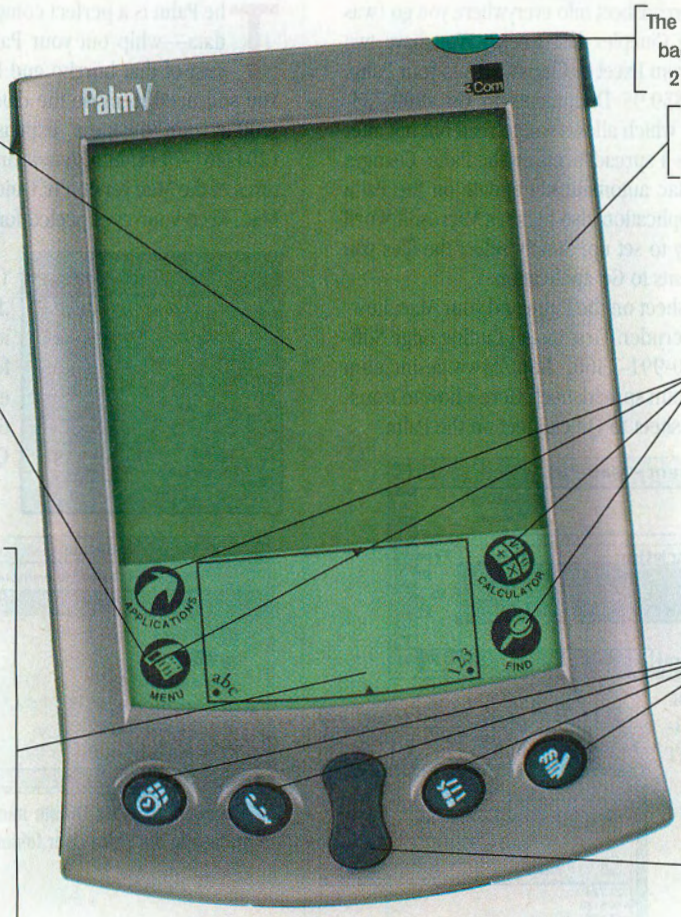
In the next few pages, we'd like to tell you all about our pal the Palm—the myriad ways this charmer can talk to your Mac applications and even synchronize data, the little companion's awesome Internet communication skills (including Web browsing), and the huge amounts of software and hardware it has at its fingertips, far more than your old love boasted. After all, these are the little things that make a PDA relationship work. We think you two will soon be jotting down sweet nothings to each other, long into the green, backlit night.

Many Models to Choose From

- **1996**—Pilot 1000 (128K memory) and Pilot 5000 (512K). Built-in apps: Datebook, Address Book, To Do, Memo, Calculator.
- **1997**—PalmPilot Personal (512K) and PalmPilot Professional (1MB, $179 street price). New built-in apps: Expense (Windows only). OS 2.0 added many enhancements. Professional added backlighting, Pilot Mail (Windows only), and TCP/IP.
- **1998**—Palm III (2MB, $299 SRP). Infrared beaming; tapered case with flip-up lid and improved pen. OS 3.0 added many enhancements. You can upgrade all pre–Palm III models to Palm III equivalent (minus the backlighting) for $129 through 3Com.
- **1999**—Palm IIIx (4MB, $369 SRP) and Palm V (2MB, $449 SRP). The Palm IIIx is a III with a better LCD screen, twice as much memory, and a new slot for peripherals. The Palm V introduced a slimmer, lighter metal case (incompatible with earlier peripherals) and a rechargeable battery.
- **Into the future:** Palm VII. The same size as the Palm III, with built-in wireless connectivity for email and special "Web clipping" downloads.

Getting to Know You

You can't tell a book by its cover, but one glance at a Palm across a crowded room will give you a medically recognized case of love at first sight. So you want photos? Here's a recent snapshot of our dearly beloved Palm V modeling its new case. And by the way, Hotsyncing may sound R-rated, but it's nothing more than the Palm's unique ability to synchronize data on the Palm and the Mac through the Palm cradle when attached to a Mac serial port.



The LCD screen displays at 160 by 160 resolution in black and white, though some third-party apps use the little-known gray-scale display capability.

The drop-down menus appear with a tap of the silk-screened Menu button. Tapping the title bar drops down a menu—very Mac-like—if you install Daniel McCarty's $4.95 Gadget Hack (http://ourworld.compuserve.com/homepages .mcdan) or DaggerWare's free MenuHack (http://www.daggerware.com/mischack.htm).

The Graffiti character set provides a special alphabet assigning single strokes to letters and numbers. Writing in Graffiti feels like printing in all caps. Tap the bottom corners for an onscreen keyboard. Here's a tip: Snip a screen protector, such as Concept Kitchen's WriteRight (12 sheets for $27.95; 415-252-3333, http://www2.conceptkitchen.com), into a rectangle to cover this scratch-prone area.

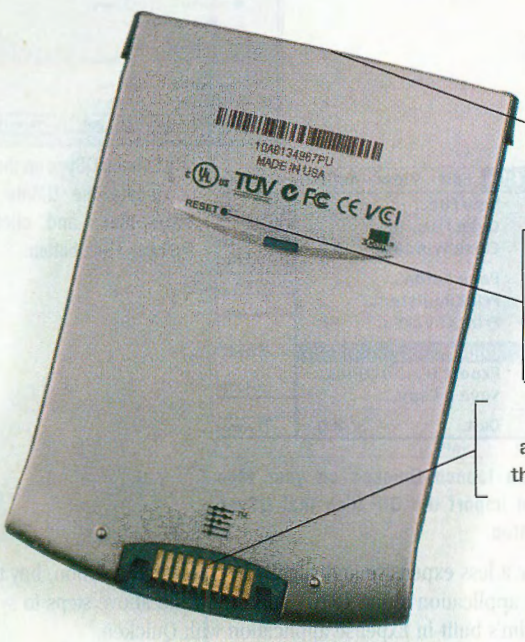
The on-off switch turns on the backlight when you press it for 2 seconds.

The new Palm V weighs just 4 ounces.

The silk-screened buttons provide one-tap access to applications, each application's drop-down menus, the calculator, and global find. In Palm OS 2 and later, you can reassign the Calculator button under Buttons in Preferences to another application.

The hardware buttons turn on the Palm and switch immediately to one of the built-in applications: Datebook, Contacts, To Do, or Memo Pad. You can reassign any button to another application.

The scroll buttons work like scroll arrows in Mac windows and come in handy for games.



The infrared port beams data to your friends who have a Palm III or Palm V. With the release of the new Palm MacPac 2, you can HotSync to a Mac's infrared port.

The reset pinhole allows you to restart a frozen Palm with a straightened paper clip. Unscrew the Palm pen's top for a handy substitute.

The serial port attaches to a HotSync cradle, modem, or third-party accessory.

MacPac 2—The Intermediary

You can't back up or HotSync your Palm without the Palm MacPac. Version 1 was a dog (woof, woof), but version 2 is a beauty, built around Claris Organizer, which 3Com bought from Apple. It's $14.95 in stores but a free download from the Palm Web site (http://www.palm.com/macintosh/index.html).

If the Claris Organizer–based PIM isn't to your liking, check out Chronos's $59.95 Consultant (801-957-1774, http://chronos.server.net/consultant/index.htm), a powerful PIM that HotSyncs perfectly with the Palm via the Palm MacPac.

SYNCHRONICITY: INTRODUCING YOUR PALM TO YOUR MAC

What fun would your new companion be if it didn't get along with your oldest and dearest friends? So go ahead—introduce your Palm around, and don't be nervous, because it'll get along swimmingly with FileMaker, Excel, and Quicken. In fact, they'll soon be swapping info like old pals.

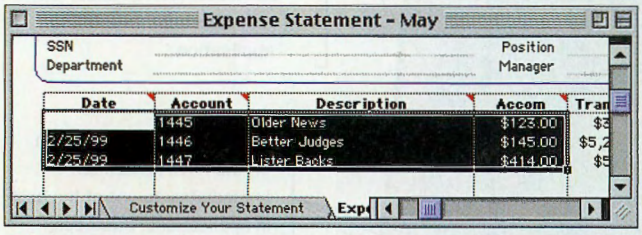
palm

Getting At Spreadsheets

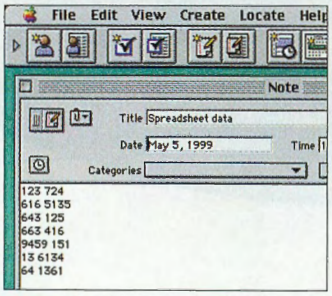
If you really must carry that spreadsheet info everywhere you go (was that your green glow in the Cineplex last week?), you have two choices for moving the data from Excel or ClarisWorks to your Palm.

The simplest is DataViz's $39.95 Documents to Go (800-733-0030, http://www.dataviz.com), which allows you to read but not alter Excel 5 and 98 and ClarisWorks 4 spreadsheets on the Palm. Changes to the spreadsheets on your Mac automatically update on the Palm each time you HotSync. (The application also handles Microsoft Word documents.) It's incredibly easy to set up. Simply select the files you want to HotSync in the Documents to Go application.

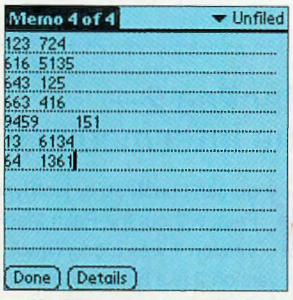
If you want to edit a spreadsheet on the Palm and your Mac, however, current solutions are far cruder. First install Cutting Edge Software's $49 QuickSheet (800-991-7360, http://www.cesinc.com/qsheet.html), a full-featured Palm spreadsheet. Here's how to transfer data from your Mac spreadsheet to QuickSheet on the Palm.



1 Select and copy the cells in your Mac spreadsheet. Select only simple numerical data—dates, text, and so forth won't make the transfer.



2 Launch the Palm Desktop on your Mac and paste the information into a Notepad document.



3 HotSync your Mac and Palm, then open the Palm Memopad and select the data in the new note.

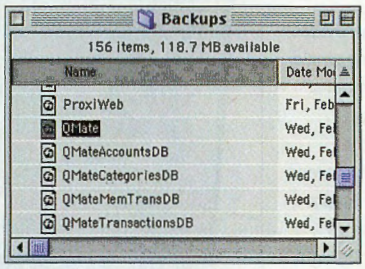
4 Open QuickSheet and select Paste Special from the Edit menu.

To move data from the Palm to the Mac, just reverse the steps, pasting data into the Palm's Memopad, Hotsyncing, and then copying from the Palm Desktop on the Mac into your Mac spreadsheet. Cutting Edge expects to have a Mac conduit available soon, so check the Web site before you go to all this trouble.

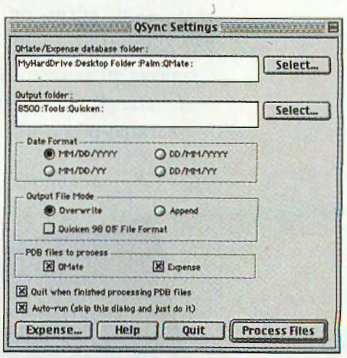
Personal Finances

The Palm is a perfect companion to help you collect your expense data—whip out your Palm in the restaurant and jot down the cost of that burrito and Dr. Pepper when you're out on a date! You still need to move the data to your Mac so your accountant can scoff at your "business" expenses. Landware's $39.95 PocketQuicken (201-261-7944, http://www.landware.com) contains many of the features of the Mac version of Quicken, but it doesn't yet HotSync with the Mac. Keep your eyes peeled for updates that bring it up to speed.

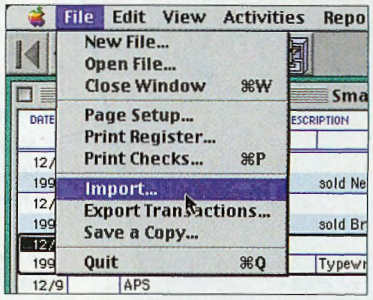
Steve Dakin's $20 shareware QMate (http://www.wco.com/~sdakin/qmate.html) makes a better Quicken companion—it puts all of Quicken's data entry features on your Palm. And like Quicken, it displays a register of your transaction. Better yet, it syncs pretty well with Quicken on the Macintosh. Here's how.



1 A HotSync creates QMate backup files in the Palm User folder.



2 Launch QSync on the Mac, locate the QMate database files, and click the Process Files button.



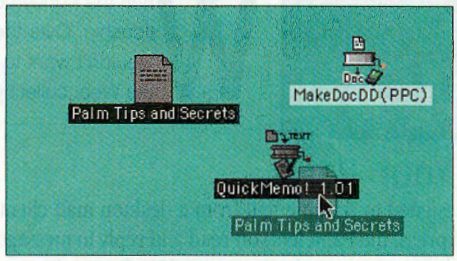
3 Then launch Quicken on your Mac and import the QIF files that QSync generated.

For a less expensive and slightly less polished solution, buy the QSync application alone ($10) and follow the above steps to sync the Palm's built-in Expense application with Quicken.

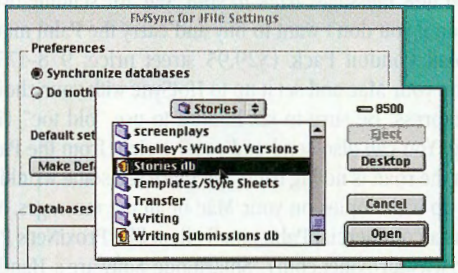
Text and FileMaker Pro Files

What would a digital companion be if it couldn't handle simple text and database information? Here's how you and the Palm can click in those areas. For small text files, Tom C. Lai's $5 shareware QuickMemo (http://users.aol.com/tclai) moves Mac text into the Palm's Memo Pad. For larger text docs, use the free MakeDocDD by Masatoshi Yoshizawa (http://www.pluto.dti.ne.jp/~yoz/PilotSoft-e.html). To read the file on the Palm, you'll need a document reader like Aportis's $30 AportisDoc (http://www.aportis.com) or TealPoint Software's $16.95 shareware TealDoc (http://www.tealpoint.com).

Getting FileMaker Pro databases into your Palm is almost as easy. Start with Land-J Technologies' $20 JFile (407-359-2217, http://www.land-j.com/jfile.html), a powerful database application for the Palm. Then install FMSync Software's $38 FMSync for JFile (http://www.fmsync.com) on your Mac. Open FMSync and select the FileMaker database. Now a HotSync updates both the Palm and Mac copies of the database to reflect your latest changes to either version.



THESE SIMPLE applications let you easily transfer text to your PDA.



WITH JFILE, you can bring your FileMaker Pro databases right into your Palm.

Hot Hardware

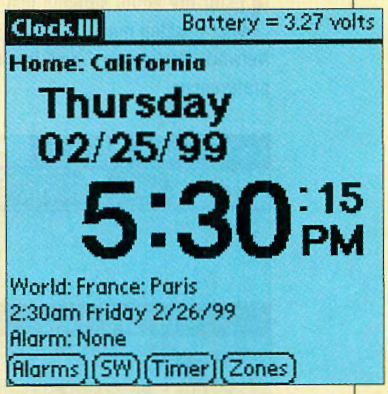
You thought the little 4-ounce Palm was the last device you'd have to carry? Ha! Here are five pieces of hardware you shouldn't live without:

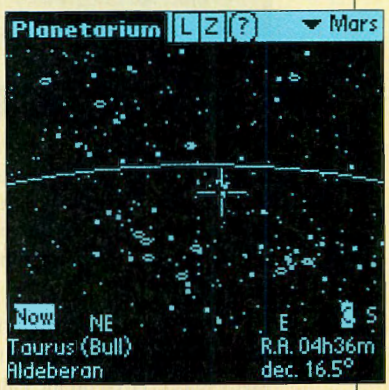
- 3Com's Palm Modem, at a $130 SRP (800-881-7256, http://palmorder.modusmedia.com), is the only way to HotSync remotely, send and receive email, and check the MacAddict Web page from the road.
- Landware's $79.95 GoType keyboard is terrific for heavy-duty input away from the desk.
- Concept Kitchen's $49.99 PDA Survival Kit includes Brain Wash screen cleaners, Karma Cloth polishing cloth, the Fingertip stylus, and WriteRight screen protectors.
- The Cross Digital Writer and Digital Writer Duo, starting at $12.50 (800-510-9660, http:// www.cross-pcg.com/digital/index.html), feel better and write much better than your original Palm pen.
- Our favorite case is Synergy Solutions' FlipCase, $22.95 to $29.95 SRP (800-210-5293, http://www.synsolutions.com), which snaps on and off your belt in a jiffy.

Cool Software

There are dozens, maybe hundreds, of system extensions for the Palm, all enabled through the $5 shareware tool HackMaster by Daggerware. One of the best is Synergy Solutions' absolutely essential $17.95 MagicText, which enables drag-and-drop text, among other neat text-manipulation tricks. Check The Disc for all kinds of cool demos and software. Here are some other must-have items:

- Download public domain nonfiction and fiction from Web sites such as http://www.memoware.com or http://www.macduff.net, then read it with TealPoint Software's $16.95 TealDoc or Aportis's $30 AportisDoc.
- And then there's new, best-selling nonfiction such as *Monica's Story* ($17.47)—Monica? Monica who?—or fiction like former Apple insider Joe Hutsko's techno-suspense novel *The Deal* ($9.99), available from Peanut Press (http://www.peanutpress.com).
- MarcoSoft's $65 Quo Vadis displays street maps of the entire United States (650-326-4727, http://www.marcosoft.com/quovadis).
- Little Wing's $24.95 Clock III (http://www.lwsd.com/ClockIII.html) is not just a clock, it's a Really Useful Clock.
- If Graffiti leaves you cold, check out input alternatives like the superfast onscreen keyboard Fitaly ($25; 800-355-5251, http://www.fitaly.com) and the smart onscreen keyboard T9 ($29.95; 206-343-7001, http://www.t9palmpilot.com).
- The night sky comes alive in real time, in Andreas Hofer's $19 shareware Planetarium (http://www.aho.ch/pilotplanets).
- Our favorite Palm arcade games include Julian Scott's $8 Graviton (http://www.seimitsu.demon.co.uk/pilotprogs.htm) and Cosmic Infinity's Lode Runner clone, the $14.95 Runner (http://www.cosmic-infinity.com).
- For less frenetic entertainment, look to Keith Wolcott's wonderful, puzzling $12 shareware PictureLogic (http://www.ux1.eiu.edu/~cfkdw/pictlogi.html).
- Finally, our favorite guide to the Palm is David Pogue's $29.95 PalmPilot: The Ultimate Guide (O'Reilly & Associates, 800-998-9938, http://www.oreilly.com), and our favorite Web sites are EuroCool (http://www.eurocool.com) and PilotGear HQ (http://www.pilotgear.com).





palm

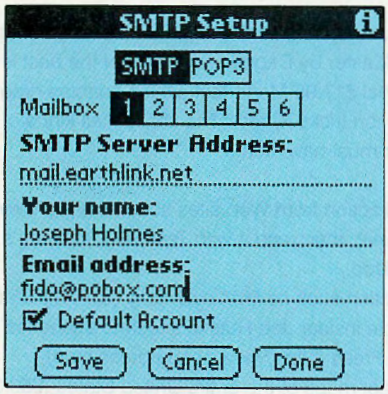
WE NEVER TALK ANYMORE

When the honeymoon is over, your Palm's communication skills will turn this into a lasting relationship. Over the years, the Palm has gained quite a repertoire of Internet skills. Though you wouldn't want to rely on it for all your daily Internet activities, in a pinch the Palm will browse the Web, collect your email, and even send a fax, all in less than 9 ounces—modem included.

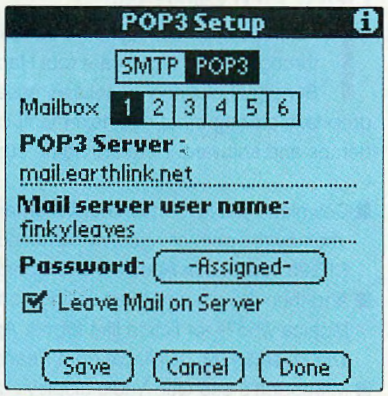
Email on Your Palm

Originally designed to scoop email from a desktop mail client such as Eudora or Outlook Express, the Palm lets you read and reply to messages, then HotSync the replies and new messages back to your Mac for sending over the wires. That's still a good solution if you don't want to buy and carry the Palm modem. Install Actual-Software's MultiMail Conduit Pack ($29.95 street price; 978-475-2690, http://www.actualsoft.com) on your Mac and set it up to HotSync with your choice of either Eudora Pro or Outlook Express. Be sure to set Eudora to use "old toc" (in the preferences) before Hotsyncing. You can also send and receive right from the Palm.

Palm email on the road is no big trick, but there are some wrinkles involved in making sure you end up with copies on your Mac of all the messages. You'll also need the Palm modem, plus a commercial Palm email client like ProxiNet's ProxiMail (in beta at press time; http://www.proxinet.com), SmartCode Software's HandMail ($49.95 SRP; 619-597-7544, http://www.smartcodesoft.com), Actual Software's MultiMail Pro ($39.95 street price), or JP System's One-Touch Communicator ($29.95 SRP; 972-484-5432, http://www.jpsystems.com/OTC.asp).

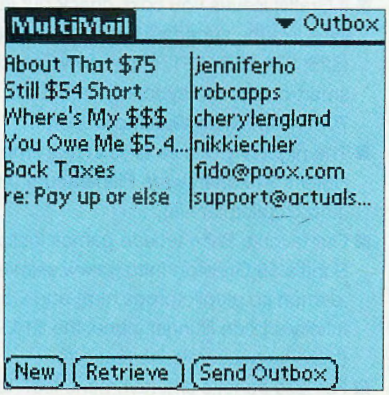


1 Enter the email settings just as you did in your desktop mail client, in both the Palm's Network Preferences and the email client's preferences.



2 Set your email preferences to preserve mail on the server, via a setting in the POP Mail preferences. That way you can later retrieve and archive your messages on the Mac.

3 Snap the modem onto the Palm and connect a phone line. Collect your mail. Most email clients allow you to choose between collecting only the headers (so you can ignore some messages) or the whole messages.



4 If you use ProxiMail, you retrieve and send mail in the ProxiMail application, then read and reply in the Palm's built-in Mail application. For the other email clients, you retrieve, read, reply, and send within the same application.

Be sure to copy yourself on new messages so you can archive email you wrote and sent from the Palm. When you retrieve your email on the Mac, you'll collect all the messages you received on the Palm, plus the copies of messages you sent.

Palm Web Browsers

You won't see color graphics, Java applications, or even animated GIFs, but you can browse Web pages on your Palm. Check out ProxiNet's ProxiWeb (in beta at press time), which runs pages through a special server to massage the graphics and layout for the Palm. Also have a look at SmartCode's HandWeb ($49.95 SRP). These are no harder to set up than your favorite browser.

Just imagine how convenient it would be to read the text of your favorite Mac news sites on the train to work every morning. It's easier than you think — you won't even need a Palm modem, just an Internet-connected Mac and your HotSync cradle. With a copy of a good macro utility such as QuicKeys, you need only press the HotSync button while you brew your coffee, then grab the Palm on your way out.

You can perform the following steps manually, or automate them in your favorite macro utility. (For details on using a macro utility to open your Mac's Internet connection and launch your favorite browser, check out "How to Automate Your Mac" [Jul/97, p36].)

1 In your Web browser, add the Pilot Screwdriver Web page (http://pilot.screwdriver.net) to your Favorites or Bookmarks menu. When you're ready to begin, select this page.

2 Press Tab twice in Netscape Navigator or once in Internet Explorer—don't ask me why it's different—to move your cursor to the first text box, URL. Type the URL of your favorite news site. Among our favorites are MacInTouch (http://www.macintouch), MacAddict (http://www.macaddict.com), and PDA-Dispatch (http://www.pda-dispatch.com).

3 Press Tab to move to the next text box, Title, and give your document a unique name. (This is important because your macro will select it by title.)

4 Press Return to click the Submit button. Repeat for every Web page you want to read. If you're recording these steps as a macro, be sure to wait a few minutes for the conversion and download.

5 Close the PPP connection and launch HotSync. Press Command-I to open the Install Handheld Files dialog box, and click the Add To List button. Now use the keyboard to navigate to your download folder and select the news file. Press Return to select your news file.

6 Now open your favorite document reader on the Palm and keep up with current events.

At one time or another, Contributing Editor Joseph O. Holmes has owned four Newtons, two Palm Pilots, and various little interactive wrist things made by Casio.

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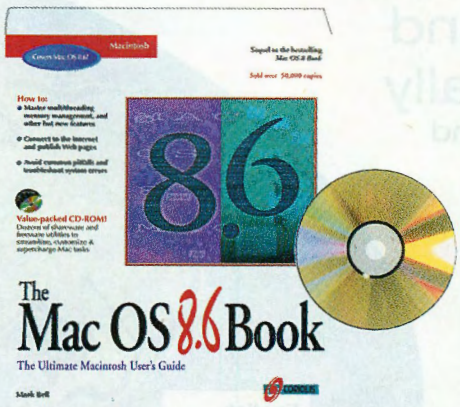

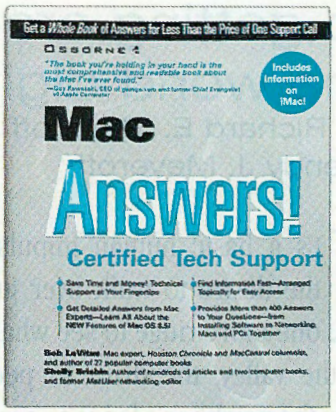

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The Virtual Mac Traveler

Your essential guide to getting around the world digitally

by Richard E. Meyeroff and Wendy J. Meyeroff

It's a basic human impulse: the desire to walk over just one more ridge to see what's in the valley, the drive to peek over the neighbor's fence to see if he's been watering his lawn or not, the urge to cross the road to get to the other side. Almost everyone wants to travel, to experience the strange and wonderful. But not everyone wants to walk away from their Mac to do it.

Never fear. You don't have to leave your Mac to experience the thrill of foreign lands and strange new locales. Instead, with some help from language software and the Mac OS, you can make documents in just about any language and even visit some of those lands virtually through the magic of the World Wide Web. We'll show you how, and you don't even have to leave your armchair to do it.

Did you know that Mac OS 8.5 with WorldScript is localized in 35 languages? Here's the list:

- Arabic
- British
- Bulgarian
- Chinese (Simplified)
- Croatian
- Czech
- Danish
- Dutch
- English (U.S.)
- English (International)
- Faeroese
- Finnish
- French
- French Canadian
- German
- Greek
- Korean
- Hebrew
- Magyar (Hungarian)
- Icelandic
- Italian
- Japanese
- Norwegian
- Persian
- Polish
- Portuguese
- Romanian
- Russian
- Spanish
- Swedish
- Swiss French
- Swiss German
- Thai
- Traditional Chinese (Taiwanese)
- Turkish

PACKING FOR THE TRIP

You've decided to take a virtual trip with your Mac. Great—but just as with a real trip, you'll need a few items before you can take off on your travels. So we've created a packing list of what to install on your Mac to make it a multilingual wonder.

Language Kits Apple sells these software packages, which enable Mac folks to create, read, and print documents in non-Roman character sets from their Macs. The kits also include keyboard layouts and transparent labels so you can see which keys match up to the foreign characters. Check out http://www.apple.com/macos/multilingual/languagekits.html for the latest.

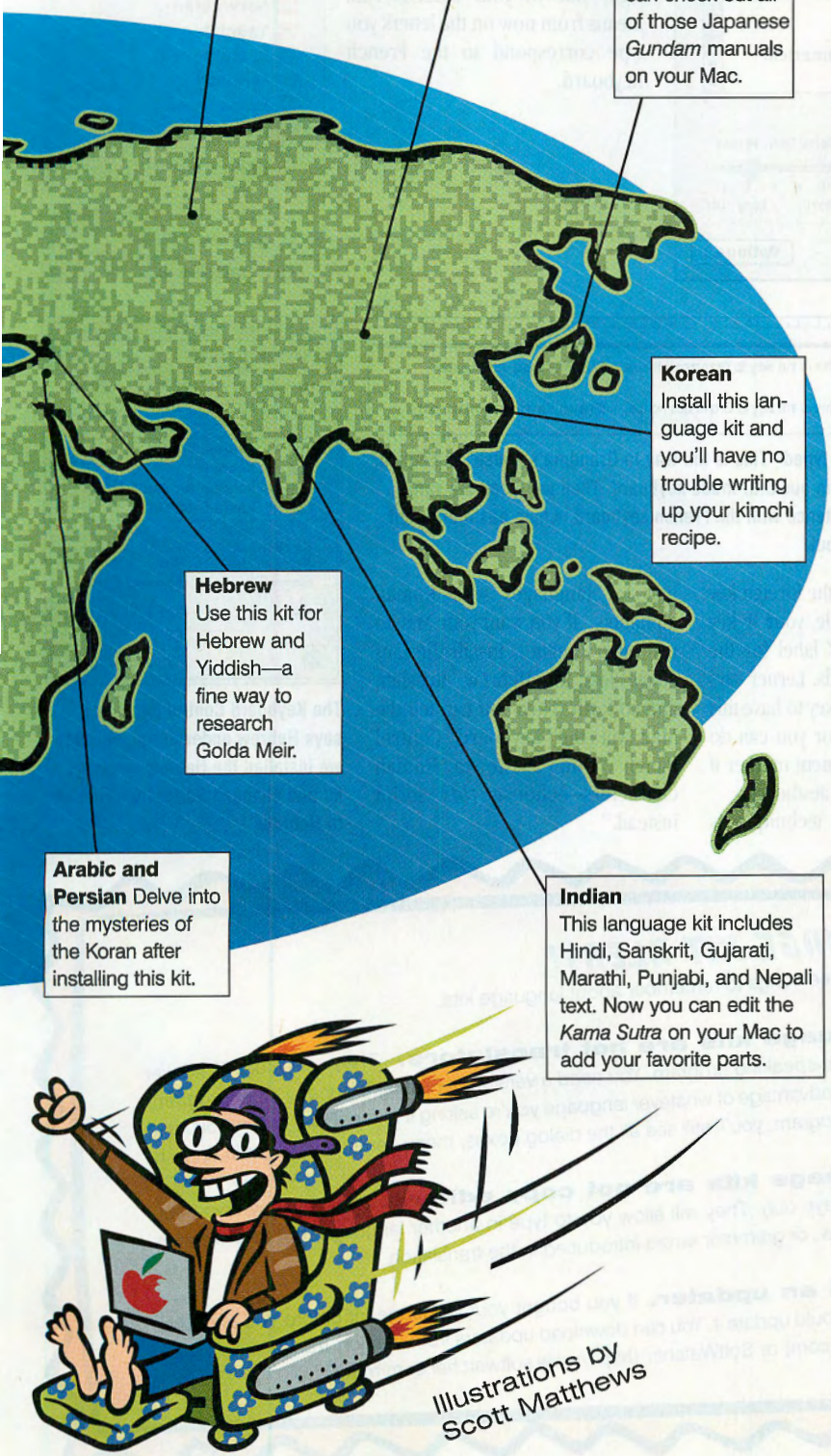
Unicode This is a new way to handle text on your Mac. In the old days, your Mac used ASCII, which only supports 256 individual characters (it uses 2 bytes per character). Unicode kicks ASCII's butt by supporting tens of thousands of individual characters, using just 1 byte per character—handy when you're writing in Chinese, which has *thousands* of characters. Apple has rolled Unicode into Mac OS 8.5 and later. However, Unicode only gives your Mac the ability to handle the characters of a language—you still need a language kit for most languages based on non-Roman character sets.

WorldScript This is the interface between language scripts and your Mac's applications. While it won't translate text for you, it does let your Mac use multiple language scripts (a language script is a way of letting your Mac map characters to a given language). The Roman language script handles most languages written with Roman character sets—English, Portuguese, French, German, and so on—and it's the basic script on all Macs. WorldScript works hand-in-hand with Unicode to interpret language scripts. Mac OS 8.5 and later include WorldScript II (while earlier versions require a separate WorldScript install).

The Proper Fonts Sounds like a no-brainer, but you'll need the right fonts to use multiple languages on your Mac. Some language kits come with foreign fonts, and you can buy additional fonts if you need them.

Disk Space and HFS Plus Support for some languages can take up a *lot* of space. Back in the old days, all Mac hard drives were HFS, but now there's a new format version: HFS Plus, which deals more efficiently with lots of small files, plus it installs Unicode support in your Macintosh. Mac OS 8.5 doesn't yet take full advantage of HFS Plus's capabilities—for example, although HFS Plus allows file names of up to 255 characters, Mac OS 8.5 still limits you to 31.

Multilanguage Applications You'll find a host of these on the market. But our favorite for basic text processing is the $99.95 Nisus Writer (800-890-3030, http://www.nisus-soft.com), long known for its ability to handle multiple languages with aplomb.

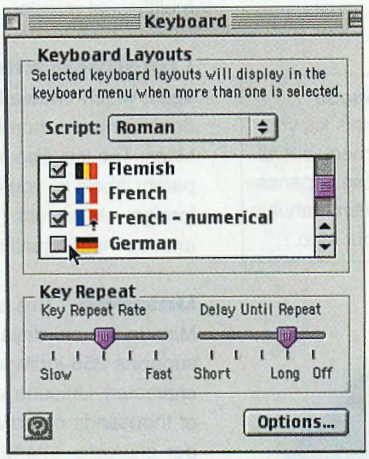


Illustrations by Scott Matthews

How to Get There

Now you want to write in another language on your Mac. After you've installed the items from our checklist (see "Packing for the Trip"), here's how you can use a language other than English for your Mac—we've chosen French for this example.

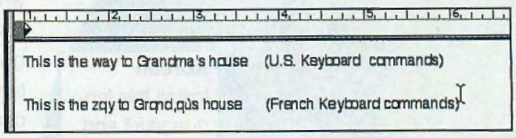
Step 1. Open the Keyboard Control Panel. This allows you to choose the language you want your keyboard to emulate, and to select various language scripts. You can select any languages you want and deselect any you don't want—so if you want to write in French but not in German, just deselect the latter in the Keyboard Control Panel. Any language from a kit should show up here under the Script pop-up menu.



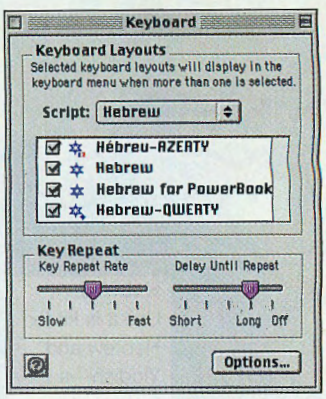
Step 2. Choose French from the Keyboard menu on the right side of the menu bar. A French flag should appear next to the application menu on the top right side of your screen. That means from now on the letters you type correspond to the French keyboard.

Step 3. Now you run into a problem. As you can see, if you type a French document using the regular American keyboard, you won't necessarily get the letters you think you're typing. You may actually need a keyboard configured for that language, or some retraining in how to use your own keyboard. We checked with Apple; it doesn't sell non-English keyboards in the United States. Its best advice: Go to the Apple Web site, find a foreign Apple dealer, and order the keyboard from that source. (Remember, you can order a French keyboard from Canada.) Our friend, David Lerner of Tekserve in New York, offers this hint: Letter your keys with both the English and the foreign key symbols—for example, your *W* key would also have a *Z* label for the French key commands. Lerner says it costs about $1 per key to have this done professionally, or you can do the job with a permanent marker if you don't care about aesthetics.

Remember, this technique is just for languages with Roman alphabets. If you want your Mac to use other tongues, install the language kits for Hebrew, Russian, and so forth. Then you can tell the Mac via the Keyboard Control Panel: "Don't write in Roman characters—choose *this* script instead."



We typed "This is the way to Grandma's house" in English, using our U.S.-made keyboard. Then we typed the same sentence with the French keyboard, which has a different layout.



The Keyboard Control Panel now says Hebrew under Script, because we installed the Hebrew language kit and changed Script from Roman to Hebrew.

Mac OS 8.5 and later has an option to install multilingual Internet access. If all you plan to do is look at Web pages in some 2-byte languages (such as Japanese), this may do the trick.

LANGUAGE KIT ALERT!

Here are three things to remember about language kits:

1. Language kits are not translators. They won't turn FileMaker into a Russian-speaking program. You need a version of FileMaker (or any other program) that can take advantage of whatever language you're asking it to run. Plus, unless you have a localized program, you'll still see all the dialog boxes, menu items, and so on in English.

2. Language kits are not copy editors. (Nor are they toys—you could put an eye out). They will allow you to type in another language, but they won't fix spelling, syntax, or grammar errors introduced in the translation.

3. Install an updater. If you bought your language kit before you had Mac OS 8.x, you should update it. You can download updaters from Version Tracker (http://www.versiontracker.com) or SoftWatcher (http://www.softwatcher.com/mac).

Useful Phrases

Now that you've got a multilingual Mac, it's time to hit the Web and do some virtual traveling. First stop is the Apple Store (via Netscape Navigator). See the Apple Store Worldwide link at the bottom of the page? That'll take you to a useful test page.

To make another language easier to read in your Web browser, you'll need to modify the spacing, font size, and so on (this stuff varies from language to language). For this you should use Mac OS 8.5 because of its solid language support. Then check your browser's instructions. Sticking with Netscape, here's how it works (Internet Explorer has similar instructions).

Go to the View menu and scroll to Character Set. You'll see a host of character sets listed—various versions of Chinese, Cyrillic, and so forth. Let's say you choose Cyrillic. This does not translate a page from English to Russian or any other Cyrillic-based language (we'll show you how to do Web page translations later)—you must already have a Web site in Russian (or whatever language you want). Instead, this feature makes the screen easier to read by modifying the character spacing. That's why Navigator allows you to choose Cyrillic for the Mac or for Windows, to account for subtle character spacing differences.

To browse in 2-byte languages, you must have the appropriate language kit installed. Mac OS 8.5 also includes an optional installation for multilingual Internet access. It takes up more disk space than a regular install, but it lets you view some Web pages in 2-byte languages without having to buy a language kit.

The Apple Store is available in a variety of languages.

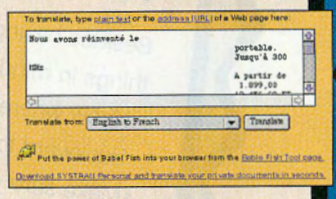
If you click on, say, Spain, you'll get the same Web page—except now it's all in Spanish.

Okay, so your Mac's Web browser is smarter than you—so what? You can still tell it in what language to operate.

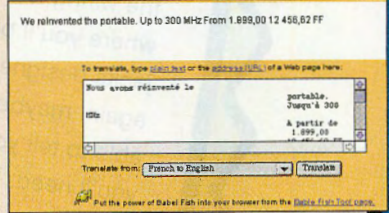
HOW TO TRANSLATE A WEB PAGE

There are several ways to translate Web pages (or any pasted text, for that matter) between languages—a useful thing when you're looking for French truffle sites or Italian bed-and-breakfasts. One of the best-known translation sites is Babel Fish (http://babelfish.altavista.com). Here's how it works (again, we're using Navigator).

Step 1. We selected the French home page of the Apple Store at the Apple Web site.



Step 2. Next we selected the text right below the picture of the PowerBook, copied it, and went to the Babel Fish site, where we pasted it. We went to the Translate From pop-up button and selected French To English, then waited for the translation. Here, the text looks broken by spaces (after pasting from the Apple site), but Babel Fish has no problem handling that!



Step 3. Voilà! The translation appears in the space on top. It's not a perfect translation, but it's not bad. You can also enter a URL and have Babel Fish translate an entire Web page.

When Travel Gets Real

Eventually, virtual traveling deepens into the real McCoy. At some point you're going to want to take the show on the road. But you're certainly not going without your Mac, are you? We didn't think so. So we double-checked with Kevin Prince of Road Warrior International and Bob Sztybel of TeleAdapt. Both companies develop and/or sell products designed to help the Mac traveler who's far from home. Here's just a bit of their advice. The "Exchange Rates" chart reveals the absolute basics you'll need, and it will give you more ideas.

Of course, the products listed may not be the sole solution or the only ones you'll want. Check catalogs, distributors, and—naturally—the Internet for more options. TeleAdapt's home page is at http://www.teleadaptusa.com. Road Warrior's is at http://www.warrior.com, and you'll also find its stuff on the Internet at MacMall (http://www.macmall.com) and MacZone (http://www.maczone.com).

What to Pack

Phone Adapters The United States uses an RJ-11 plug, but most countries don't. There are close to 40 differently configured adapters, designed to fit your modem into the phone jack in a particular country. In fact, some countries have more than one adapter; TeleAdapt's catalog shows five different types for Germany alone.

Modem Protector You just *don't* go around plugging your modem into an untested phone jack. This may endanger your modem (maybe there's too much juice for it to handle), or the jack may not be active. A modem protector lets you test the jack and run your modem safely.

Power Adapters and Converters The same principle applies as for phone adapters, but power adapters let you plug electrical wires into the power outlets in a foreign country (for example, you can plug in the cable for your laptop so it doesn't have to run on batteries). Also, remember that while U.S. power outlets work at 110 volts, overseas outlets are often 220V. (A good adapter should allow your device to accept up to 240V, just to be safe.)

Surge Protector This works like your modem saver, except that it offers protection for your Mac against sudden surges from the electrical outlet.

EXCHANGE RATES

PROBLEM	GENERAL SOLUTION	SUGGESTED PRODUCT/PRICES*
Plugging a modem into a pay phone	An acoustic coupler	Road Warrior Telecoupler II/$116.99
Switchboards using digital phone technology (in hotels and foreign offices) don't mesh with analog modems	May need two products; one to test the line, another to connect	Road Warrior Modem Saver Plus/$28.95
Carrying unwieldy lengths of phone cable	Retractable cord	TeleAdapt Telespool/$10 Road Warrior ConnectCord/$15.98
Tax impulses: Some countries still have local phone systems that periodically send pulses through the line to see if it's working—this can break off your call (up to 20 times an hour)	Impulse filter	TeleAdapt TeleFilter/$60 Road Warrior Modem Saver International Filter/$34.95

* Suggested retail prices in U.S. dollars.

Richard E. Meyeroff is a leading Mac consultant, serving the tristate New York metropolitan area from his office in Brooklyn. His wife, Wendy J. Meyeroff, a nationally published author since 1978, got dragged into computer reporting in 1988 to keep peace in the family.

Other Useful Traveling Tips

Besides having the technology, keep these things in mind if you're going to be traveling:

- Know where you're going *first*, then work backward to plan your equipment needs.
- Make sure you have receipts for your equipment in case customs officials question you.
- Call ahead—find out how sophisticated the wiring is at the lodging and/or offices where you'll be. (Maybe they already have jacks designed to handle modems—then again, maybe not.) Also, the staff may be able to tell you what kind of adapters you'll need.
- Using a modem? Ask ahead of time how much the phone call costs (and make sure you understand the currency exchange rate).
- If you're one of those rare souls who drags a printer with you everywhere, beware. Printers work on the electrical system of their country of origin. (Check the plate on the back.) You may need to find a transformer to use that machine in a foreign country.
- Most important, carry as little equipment as possible.

$50 Off This Incredible Color Scanner. Don't Worry It's Legal.

FREE BONUS
35mm slide adapter

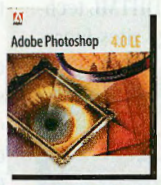
MICROTEK
ScanMaker® X6EL

F E A T U R E S

Purchase Microtek's legal-size, high-resolution *ScanMaker® X6EL* color scanner from May 1, 1999 to July 31, 1999 and get a $50 manufacturer's mail-in rebate (coupon with complete rebate terms and conditions† available at **www.microtekusa.com**). The 36-bit ScanMaker X6EL is capable of delivering more image data for scans with richer, smoother tonal values than you can get from comparably priced 24-bit and 30-bit scanners. It even includes the *LightLid™ 35*, a 35mm slide adapter for scanning slides.

The ScanMaker X6EL's push-button design calls up Microtek's *ScanSuite™* utility. ScanSuite's presets let you quickly scan photos or documents and route them to your printer for a quick copy, your fax or email software, or directly to *Adobe Photoshop LE* (included), *Caere OmniPage Limited Edition* OCR (included), or any favorite application you have on your computer. To access even more image controls and effects, ScanSuite also lets you call up Microtek's award-winning *ScanWizard™* scanning software.

†Limited Time Offer.



OP LIMITED EDITION

- Legal-size scan area
- Push-button scanning
- Fast single-pass scans
- 600 x 1200 dpi optical resolution
- 9600 x 9600 dpi enhanced resolution
- LightLid™ 35 - slide/filmstrip adapter

MICROTEK
www.microtekusa.com

Bundled software on CD-ROM / retail packaging depicted is not available with these products. All products mentioned are trademarks or registered trademarks of their respective holders. Specifications and software bundles are subject to change without notice.

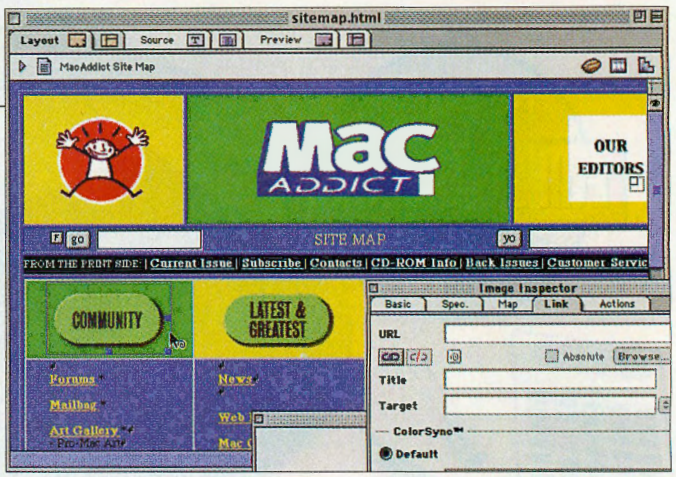
reviews

It's smooth summer sailing with apps, games, and hardware goods like these.

Adobe GoLive 4.0

DESIGN & GRAPHICS

COMPANY: Adobe Systems
CONTACT: 800-833-6687, http://www.adobe.com
PRICE: $299 (SRP), $275.99 download, $99 upgrade from registered versions of GoLive CyberStudio or Adobe PageMill ($199 upgrade after September 1, 1999), $69 downloadable upgrade
REQUIREMENTS: PowerPC, Mac OS 8.0 or later, 24MB of available RAM (32MB recommended), 30MB of free hard disk space (45MB recommended), CD-ROM drive



THE HAND IS QUICKER THAN THE EYE. The cursor is also context sensitive—so sensitive that getting a grip on it can be difficult.

FREAKIN' AWESOME
The most valuable products, the coolest gizmos.

SPIFFY
A solid offering. Overall a good

YEAH, WHATEVER
A few good features, but generally a waste of time and money.

BLECH!
We hate to even blotch our pages with the thing.

You know the saying: Start up, kick butt, cash out. The Web power tool formerly known as GoLive CyberStudio opened its can of butt-kick last year with a feature-packed version 3.0 (Aug/98, p48) aimed squarely at the upper echelon of professional Web developers. In January, Adobe Systems acquired GoLive Systems and the rights to CyberStudio, and now it has released its own incarnation of the product, GoLive 4.0.

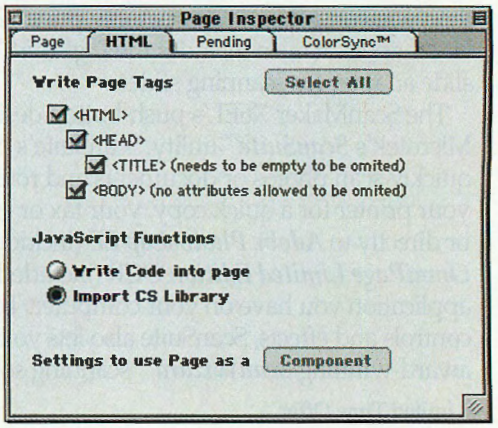
For its cash, Adobe got a mature product adept with the latest DHTML technologies, able to manage large sites incrementally, full of the latest WYSIWYG and drag-and-drop tricks to facilitate visual Web authoring, yet still respectful of HTML markup—a product Adobe would surely like to evolve into the Photoshop of Web publishing. The first step on the road to industry dominance is obvious, if not immediately gratifying for Mac addicts: cross-platform (Windows) compatibility. In the grand scheme, this is actually a key feature that will keep Mac-loyal professionals in the game, whatever hardware their design teammates use.

TOTAL CODE CONTROL is in your hands, thanks to the database of tag specs. Use the standardized sets of HTML, CSS, ASP, WebObjects, and other codes, or duplicate and modify a set to create your own standards.

Given the vagaries of Web technology—the evolving JavaScript and HTML specifications, browser peculiarities, and other proprietary code—flexibility is crucial in a serious development tool. Adobe GoLive 4.0 comes through—it offers tight user control over both the production environment and the final output, be it a couple of pages or a massive database-driven Web site. Within the extensive Preferences dialog box you'll find a Modules Manager, which lets you toggle certain features on and off, including WebObjects and PNG image support, site management, foreign language encoding, and a number of GoLive's nonessential editing and preview modes. This is a nice touch, considering the potential for user confusion amid the overwhelming (in some cases redundant) array of functional options and methods.

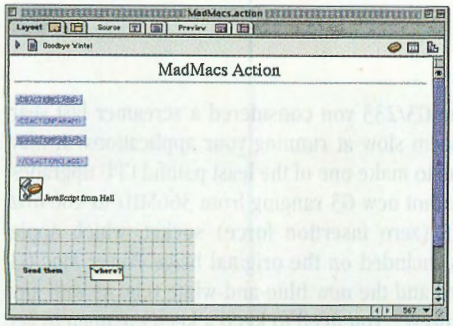
GoLive requires certain Modules to do its work. The Web Database, for instance, is the cornerstone of GoLive 4.0, even though you may never open it. HTML purists will start here, where they can adjust their code's format and syntax on a tag-by-tag basis. The Web Database covers the entire HTML 3.2 specification, a subset

ONE OF THE KEY FORMATTING OPTIONS is the ability to store JavaScripts and CSS definitions in an external library, where they'll be out of your way yet conveniently available to all your pages.

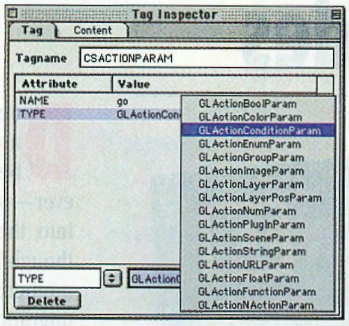


You're Pushing My Buttons

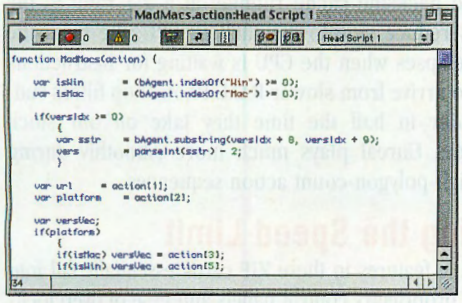
It's almost easy to roll your own pushbutton JavaScript Actions to extend the 50-odd Actions that come with Adobe GoLive 4.0. We made one to redirect Wintel users to an as-yet-unnamed site.



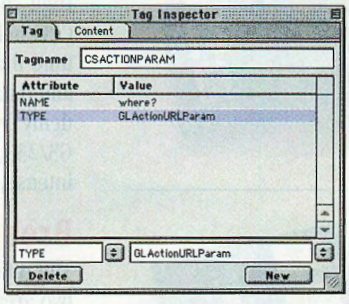
1 Inside the GoLive folder, open Modules, Jscripts, Actions, then Template.action; or simply duplicate another Action file. Rename the file some.action—in this case, MadMacs Action—and save it (outside the Actions folder if you're new at this).



2 Build your own Inspector Window via the Tag Inspector. Set class attributes, variables, and option parameters via pull-down menus. Notice that the parameters have the same names as the input boxes below—this is required.



3 Drag in a JavaScript icon and type or paste the head and/or body scripts in the JavaScript Editor, which you invoke by clicking the Bean icon (second to last in the menu). Make sure the name matches the action tag in Step 1.



4 Add input boxes and name them to match the parameters in Step 2. Relaunch GoLive to see your Action in the list. Simple, eh? Now try a more complex Action—the sky's the limit!

of the emerging 4.0 standard, as well as browser-specific and otherwise unsupported tags. The database also provides full compatibility tag sets for the various interpretations of Cascading Style Sheets (CSS). Advanced users will set up camp here, redefining the format and function of any tag in custom CSS sets through the convenient Inspector Window, while watching their styles take form instantly in Layout view. You also use the Tag Database to configure the optional WebObjects Module and to handle instructions for Extensible Markup (XML) and ASP tags. Guru-level users can teach GoLive 4.0 to accommodate almost any proprietary code.

Integration is a recurring theme in GoLive 4.0's new features, though it doesn't focus primarily on Adobe's other design tools as you might expect. Your graphics and multimedia applications are still a click away, but GoLive 4.0 handles the tedious process of checking URLs that can seriously bog down work including rich media and plug-in–dependent files such as QuickTime 3, Adobe's own PDF, and Macromedia's Flash and Shockwave. Provided you're working within a defined site, GoLive's link-parsing mechanism creates an editable list of all external links—including those embedded in most types of multimedia files—sparing you a trip to another authoring program just to change a link or two. GoLive updates local links within the site, with or without an alert box, every time you update the Site Window. This is a product of GoLive's tight integration with the Mac OS's Finder, a relationship that also benefits the Site Window with spring-loaded navigation, dynamic scrolling, and full drag-and-drop support.

TAB YA LATER: You can stash five floating windows, each essential to the program's drag-and-drop and point-and-click functionality, behind handy spring-loaded tabs. Good thing, too, considering how messy the interface can get.

The integrated QuickTime Movie Editor is a real treat, even though it doesn't provide for creation or time editing of video tracks. Once you have imported your audio and video tracks, you can subject them to the full array of QuickTime 3's effects and transitions; or you can add Hypertext Reference Tags, Text, and Sprite tracks to create interactive, hot-linkable movies. When it's time to plug in the movie—or almost any other form of plug-in–based media—GoLive loads the Inspector Window with parameters for several media types.

GoLive raises an unlikely question: Is it possible to provide *too much* drag-and-drop functionality? To Adobe's credit, the interface is generally smooth and manageable, but unfortunately it carries on GoLive CyberStudio's legacy of icon overload. Even basic tasks often require several steps to complete, and those slick, context-sensitive inspectors easily ambush the uninitiated. The Hothelp cues help, but these tell you only what the icon stands for, not which of the Inspector Window's multiple personalities will appear or what to do with it. Like any fun power tool, GoLive can complicate things if you don't know what you're doing—but that's what Undo is for.—*Niko Coucouvanis*

GOOD NEWS: Flexible handling of code at all levels. Edits links embedded in rich media files. Site window is like an extension of the Finder. A myriad of conveniences.

BAD NEWS: A myriad of conveniences can be confusing. Icon overload. Schizophrenic interface. Point-and-click is often hunt-and-peck.

in review

AUDIO
HARMONY 1.0 p. 62

DESIGN & GRAPHICS
ADOBE GOLIVE 4.0 p. 46
BORIS AE 2.0 p. 54
EVOLUTION 1.0 p. 54
KNOLL LENS FLARE PRO p. 54
HEADLINE STUDIO 1.0 p. 64
FREEWAY 2.02 p. 66
VR OBJECTWORX, PANOWORX, SCENEWORX 1.01 p. 70

HARDWARE
G3 ZIF UPGRADES p. 48
MP 850 p. 50
EPSON PHOTOPC 750Z p. 56
HITACHI GF-1050 DVD-RAM p. 58
EPSON STYLUS COLOR 900 p. 60
USB ZIP DRIVE p. 69

MULTIMEDIA
LIVESTAGE DR 1.0.1 vs. ELECTRIFIER PRO 1.0 p. 52

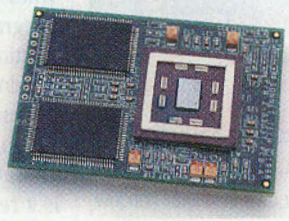
FUN & GAMES
CIVILIZATION II GOLD EDITION p. 68
STARSHIP TITANIC p. 72

UTILITIES
STUFFIT DELUXE 5.1 p. 65
SPRING CLEANING 3.0.1 p. 67
WEB BUDDY 2.0 p. 73

G3 ZIF Upgrades

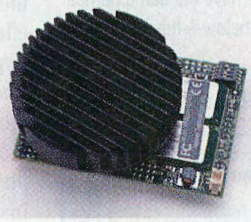
HARDWARE

Encore G3 400



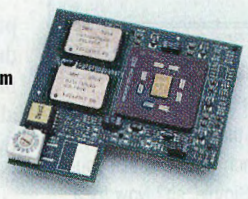
COMPANY: Sonnet
CONTACT: 949-261-2800, http://www.sonnettech.com
PRICE: $699.95 (street)
REQUIREMENTS: Desktop or minitower G3, or blue-and-white Power Mac G3
SPECIFICATIONS: 1MB with 200MHz cache

MaxPowr G3 466



COMPANY: Newer Technology
CONTACT: 316-943-0222, http://www.newertech.com
PRICE: $849 (street)
REQUIREMENTS: Desktop or minitower G3, or blue-and-white Power Mac G3
SPECIFICATIONS: 1MB 233MHz cache

PowerForce G3 ZIF 366

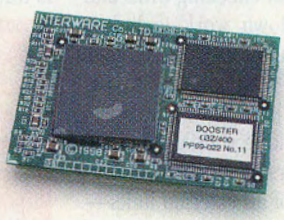


COMPANY: PowerLogix
CONTACT: 512-795-2978, http://www.powerlogix.com
PRICE: $579 (street)
REQUIREMENTS: Desktop or minitower G3, or blue-and-white Power Mac G3
SPECIFICATIONS: 1MB 183MHz cache

PowerForce G3 ZIF 466

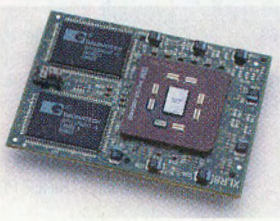
PRICE: $799 (street)
REQUIREMENTS: Desktop or minitower G3, or blue-and-white Power Mac G3
SPECIFICATIONS: 1MB 233MHz cache

Vpower G3 Z400/1MB



COMPANY: Vimage
CONTACT: 877-484-6243, http://www.vimagestore.com
PRICE: $689 (street)
REQUIREMENTS: Desktop or minitower Power Mac G3 (no blue-and-white G3 compatibility)
SPECIFICATIONS: 1MB 200MHz cache

XLR8 Mach Speed G3Z 400



COMPANY: Interex
CONTACT: 316-636-5544, http://www.xlr8.com
PRICE: $729 (street)
REQUIREMENTS: Desktop or minitower G3, or blue-and-white Power Mac G3
SPECIFICATIONS: 1MB 200MHz cache

Does the G3/233 you considered a screamer last year now seem slow at running your applications? It may be time to make one of the least painful CPU upgrades ever—slip a hot new G3 ranging from 366MHz to 466MHz into the ZIF (zero insertion force) socket, which Apple thoughtfully included on the original beige Power Mac G3 motherboard and the new blue-and-white G3s. As with any upgrade, however, you need to keep a keen eye open to get the best value, and extra features can subtly tip the balance.

Pure speed awaits you with these hot upgrades, perfect for the most demanding graphics tasks and the latest joystick-thrashing games. In terms of performance, our Norton 4.0 benchmarks show a directly proportional increase of CPU power to clock speed—no surprise there. High-speed backside cache running at a 2:1 ratio to the CPU helps reduce slowdowns such as CPU idle time, the time that elapses when the CPU is waiting for instructions and data to arrive from slower RAM. Photoshop filters suddenly render in half the time they take on our stock G3/233, and Unreal plays much more smoothly during intense, high-polygon-count action sequences.

Breaking the Speed Limit

The differing features in these ZIF cards essentially fall into two areas: proprietary control panels and ease of overclocking (which is how you rev the G3 into the yellow and red zones by changing jumper settings). Overclocking is often seen as a dubious practice, and we wouldn't normally scream about this feature. Why mess with jumpers at all?

Despite the dangers, thrill seekers appreciate any chance to squeeze out more speed. Also, for the blue-and-white G3s, you do have to make a bit of an adjustment: Because of the 100MHz system bus, you must adjust the ZIF clock ratio (normally set for a 66MHz system bus for beige G3s) to match a multiplier ratio such as 4:1. Sonnet's Encore G3 makes this adjustment automatically, but does not allow any other modifications. XLR8's Mach Speed, Newer Technology's MaxPowr, and PowerLogix's PowerForce cards are designed so you can overclock them 10 to 20 percent, which means you get a bigger bang for your buck. You can't overclock Vimage's Vpower G3 Z400, nor is it compatible with the blue-and-white G3s.

Software and Compatibility

A control panel in the PowerLogix PowerForce, Newer Technology MaxPowr, and XLR8 Mach Speed upgrades also lets you adjust the backside cache ratios, in essence overclocking that subsystem. This can make the upgrade unstable, so proceed with caution. This tweakable control panel for adjusting the backside cache mainly appeals to overclockers, so this feature shouldn't sway the average buyer. In the case of PowerLogix's and Newer Tech's cards, however, the ZIF upgrade cache cannot function unless you have the control panel loaded at startup.

Gauge a Need for Speed

How much of a return you'll get on your investment should determine your upgrade decisions. A G3/233 upgraded to 400MHz compares favorably in speed with a new 400MHz blue-and-white G3 and is pretty affordable. For many, the advantages of a sleek new blue-and-white case with USB and FireWire are shallow, given the cost of transferring SCSI peripherals and the time it takes to set up a new system. Of all the commendable ZIF upgrades we tested, we most liked Newer Technology's MaxPowr G3 466 and PowerLogix's PowerForce G3 ZIF 466. Quite simply, they give you the best bang for your buck. Newer's MaxPowr G3 466 upgrade card has a great name behind it, and it costs about the same as the PowerForce G3 ZIF 466. Prices continue to drop.

Here's the bottom line: If you work in graphic design, multimedia, software development, or are a cutting-edge gamer itching for Quake III, a ZIF upgrade is worth your while. If you're running Word, a Web browser, and an email client, then a ZIF upgrade is a luxury you can live without.

The G3 is hitting its sweet spot at 400MHz to 500MHz, and upgrading is painless. For the most current prices, consult the companies' Web sites or retailers' sites or catalogs.—*Samuel Parker*

Bench It, Baby

	NORTON SYSTEM		UNREAL FRAME RATES	
	CPU TEST	FPU TEST	640 X 480	800 X 600
Original G3/233	6.4	5.5	27.4	24.5
Encore G3 400	11.4	9.4	40.2	32.1
INCREASE	+78%	+72%	+47%	+31%
MaxPowr G3 466	12.9	11.0	42.9	33.3
INCREASE	+102%	+100%	+57%	+36%
PowerForce G3 ZIF 366	10.6	8.6	38.9	31.6
INCREASE	+66%	+57%	+42%	+29%
PowerForce G3 ZIF 466	12.9	11.0	42.4	33.2
INCREASE	+102%	+100%	+55%	+36%
Vpower G3 Z400/1MB	11.4	9.4	40.1	32.0
INCREASE	+78%	+72%	+46%	+31%
XLR8 Mach Speed G3Z 400	11.3	9.4	40.3	32.0
INCREASE	+77%	+72%	+47%	+31%

Test system: G3/233, 128MB of RAM, virtual memory off, Mac OS 8.5.1, Micro Conversions GameWizard Voodoo2, and Norton Version 4.0. Unreal test is the average frames per second after one cycle of the castle fly-by. All quality settings on.

Encore G3 400

GOOD NEWS: Automatic configuration gives blue-and-white G3 compatibility (autoadjusts to 100MHz bus without software). BAD NEWS: No overclocking.

MaxPowr G3 466

GOOD NEWS: Overclockable to flying 533MHz speeds. BAD NEWS: Funky-looking heat sink.

PowerForce G3 ZIF 366

GOOD NEWS: Great value for price. Modifiable clock ratios via a single dial. BAD NEWS: Requires control panel to enable cache. Runs hot.

PowerForce G3 ZIF 466

GOOD NEWS: Pentium III–busting, blazing speed. Overclocking to 533MHz via dial modification. BAD NEWS: Requires control panel to enable cache.

Vpower G3 Z400/1MB

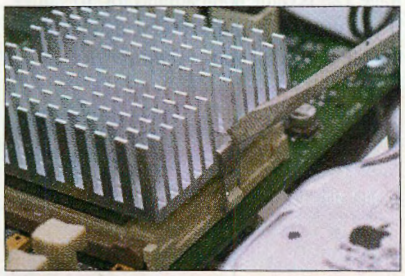
GOOD NEWS: Bare-bones performance. Competitive price. BAD NEWS: The lack of on-card jumpers means no compatibility with blue-and-white G3s and no overclocking.

XLR8 Mach Speed G3Z 400

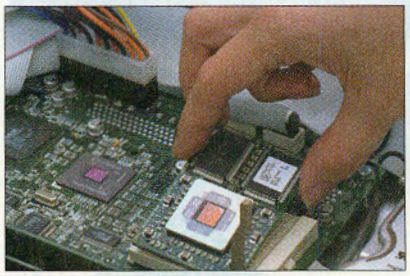
GOOD NEWS: Small on-card jumpers allow overclocking for thrill seekers. Deluxe installation toolkit.
BAD NEWS: Jumpers are tiny. Costs more than other 400MHz cards.

Easy Come, Easy Go

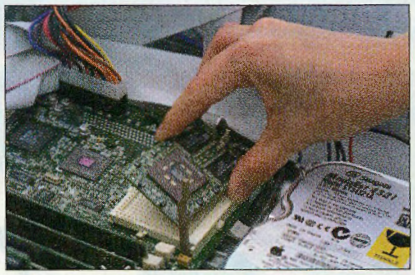
With the ZIF socket, installing a new CPU couldn't be easier. Handling precious jewels like these does, however, require a few precautions.



1 Open the case and expose the logic board. Discharge any static on the grounded power supply before removing the power cord. Remove the heat sink using a screwdriver.



2 Insert the tool in the slot on the metal fastener and ease it over the tab. Lift the locking lever to the vertical position and remove the ZIF card.



3 Carefully line up the card, taking notice of the one missing corner pin. Insert the new ZIF card with minimal force. Put the heat sink back on, replace the screw, and close up the case.

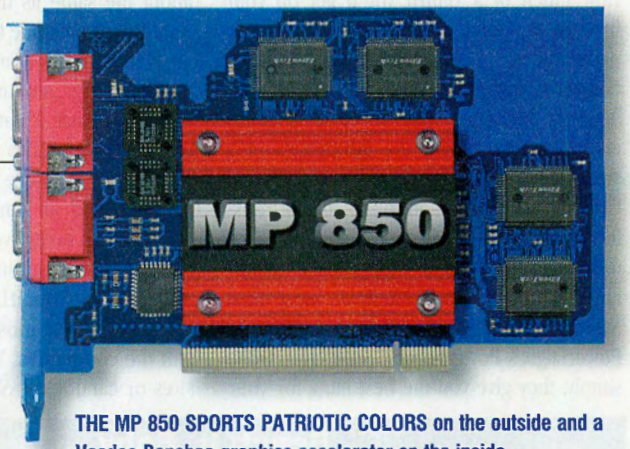
Photos by Aaron Lauer

reviews

MP 850

HARDWARE

COMPANY: VillageTronic
CONTACT: 800-317-7217, http://www.villagetronic.com
PRICE: $299.95 (SRP)
REQUIREMENTS: PCI-based Power Mac, System 7.5.3 or later, 16MB of RAM, 5MB of free hard disk space
SPECIFICATIONS: 3dfx Voodoo Banshee 2D and 3D graphics accelerator running at 100MHz, 16MB of SGRAM, 250MHz RAMDAC, maximum resolution of 2000 by 1250 in 16-bit color (thousands of colors)



THE MP 850 SPORTS PATRIOTIC COLORS on the outside and a Voodoo Banshee graphics accelerator on the inside.

Time was when 3dfx's Voodoo Banshee was enough to excite gamers, but graphics accelerators such as the Riva TNT and ATI Rage 128 have long surpassed the Banshee's offerings. VillageTronic aims its Voodoo Banshee–powered MP 850 at the Mac desktop publishing and hard-core gaming markets (its MacMagic Pro is an MP 850 with gamer-oriented packaging), but the card doesn't deliver in key areas.

The good news is that the MP 850 is a respectably fast graphics accelerator that harks from 3dfx's earlier Voodoo2 chip set. Basically, the MP 850 sports a Voodoo2 core and adds a 128-bit 2D accelerator, but lacks the Voodoo2's additional texture processing unit. The MP 850 clocks in at 10MHz faster than the Voodoo2's 90MHz. The bad news is that the MP 850 doesn't support anything higher than 16-bit color depth in 3D. In 32-bit color 3D, the result is noticeable dithering. In contrast, the Rage 128 handles true color perfectly, as our latest tests of OpenGL-based Quake 3 in 32-bit color depth and 32-bit texture detail evidence.

As a 2D accelerator of multimedia files and graphics applications such as Photoshop, the MP 850 compares to a Rage 128 with the same amount of video memory—no surprises there. We tested the high-quality *Star Wars Episode I: The Phantom Menace* trailer at 1600 by 1200 in millions of colors (the card's maximum output), and it played flawlessly at the Double Screen and Fill Screen sizes without dropping a frame. The 16-bit color was quite good—a surprise indeed, given the Voodoo Banshee chip set's inherent hardware incompatibility with the Mac OS's 5-5-5 RGB pixel format (the Banshee uses 5-6-5). VillageTronic successfully overcame this problem in software.

Unfortunately, as a 3D graphics accelerator and a 2D-3D accelerator, the MP 850 is not ready for prime time. Two key drivers necessary for running 2D and 3D simultaneously (for example, 3D graphics in a 2D window) were missing at press time. Moreover, the lack of RAVE and OpenGL drivers makes hardware acceleration of QuickDraw 3D RAVE or OpenGL apps impossible. No Mac 3D graphics apps such as LightWave 3D or Ray Dream Studio support the Glide API (only 3D games do). This leaves unfulfilled the MP 850's potential as a dedicated graphics card for desktop 3D and design. With only a Glide driver for 3D, the sole "application" we could use to test 3D performance was a game, Unreal (see "Voodoo Banshee and Voodoo2 Death Match").

With the prices of Rage 128–based boards such as the Rage Orion, Xclaim VR 128, and Nexus 128 hovering at $100 less—and given the Rage 128's native support for 32-bit color, single-pass multitexturing, and up to 32MB of video memory—the Voodoo Banshee–based MP 850 is a tough sell. The only reason to choose the MP 850 over the Rage 128 is Glide compatibility for 3D games. If you want to spend $100 for that privilege, the MP 850 is for you.—*Jennifer Ho*

Voodoo Banshee and Voodoo2 Death Match

The higher the frame rate, the better the performance.

Resolution	Voodoo Banshee	Voodoo2
640 X 480	28.04	38.52
800 X 600	21.49	32.39

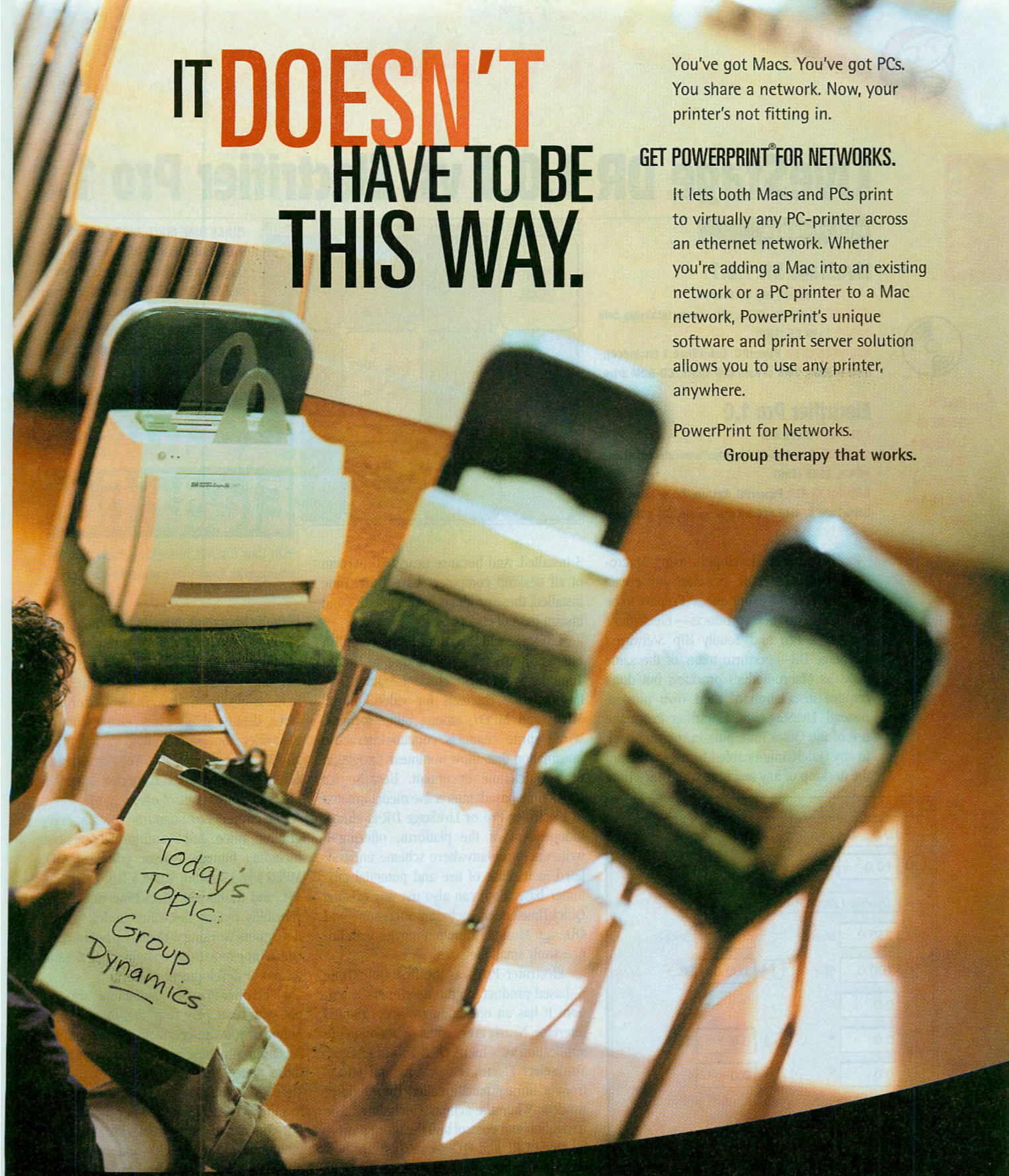
Test machine: Power Mac G3/400, 96MB of RAM, virtual memory off, Mac OS 8.5.1, Unreal 1.02b4 (223), all high-quality settings on, XLR8Yourmac Unreal FPS Toolkit, 16MB Voodoo Banshee MP 850, and 12MB Voodoo2 Game Wizard.

Vive la Différence!

Voodoo Banshee cannot process 32-bit color in 3D; hence the noticeable dithering in Quake 3 with 32-bit color enabled.

Rage 128 can handle 32-bit color in 3D. Look at the smooth gradients in these clouds.

GOOD NEWS: Speedy 2D. Fast 3D. 3dfx Glide compatibility. Takes up only one PCI slot. Supergeeky control panel allows all possible display tweaks.
BAD NEWS: Doesn't support single-pass multitexturing. Supports no more than 16MB of video memory. Supports only 16-bit color in 3D. RAVE driver not shipping. OpenGL driver not shipping. Pricey optional video-out and video-in–TV modules add $120 and $170, respectively, to the bottom line.



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LiveStage DR 1.0.1 vs. Electrifier Pro 1.0

MULTIMEDIA

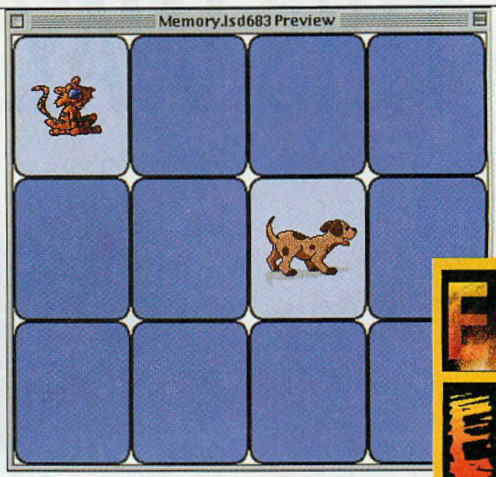
LiveStage DR 1.0.1

COMPANY: Totally Hip Software
CONTACT: 604-685-6525, http://www.totallyhip.com
PRICE: $199.95 (SRP)
REQUIREMENTS: PowerPC, QuickTime 3 (included), 5MB of RAM, 3MB of hard disk space, CD-ROM drive

Electrifier Pro 1.0

COMPANY: Electrifier
CONTACT: 919-968-0701, http://www.electrifier.com
PRICE: $595 (SRP)
REQUIREMENTS: PowerPC, System 7.5 or later, QuickTime 3, 4MB of hard disk space, CD-ROM drive

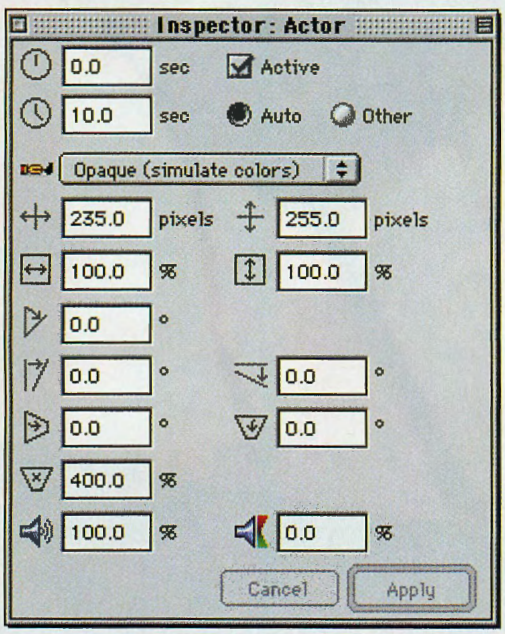
FIND A DEMO of LiveStage DR and Electrifier Pro on The Disc.



QUICKTIME ISN'T JUST FOR VIDEO ANYMORE. With the new QuickTime 3–based Electrifier Pro and LiveStage DR, Web authors can create interactive games and movies that play back in browsers or from the desktop, like this memory game created in LiveStage.

YOU CAN CREATE interesting ripple and fire effects with Electrifier Pro's zero-bandwidth codec tools.

All you Web developers using Macromedia Director or Flash to create media-rich experiences: Prepare to be stunned. Two new products—Electrifier's Electrifier Pro and Totally Hip Software's LiveStage DR—perform many of the same tasks as Macromedia's products but don't require installation of their own plug-in. Instead, LiveStage and Electrifier Pro make use of the QuickTime plug-in, playing back in any QuickTime-enabled browser or from the desktop of any machine with QuickTime 3 installed. And because nearly 70 percent of all desktop computers have QuickTime installed, these products have a massive and instant base of clients.



WITH ELECTRIFIER PRO'S INSPECTOR WINDOW, you control a sprite's size, location, perspective, and skew by simply typing text into a field.

LiveStage and Electrifier Pro accomplish interactivity by taking advantage of QuickTime 3's wired sprite channels. QuickTime has separate channels for video, music, MIDI, and MPEG, among other formats. Wired sprite channels contain interactive information that allow nonlinear navigation of a QuickTime document. Because it's QuickTime based, interactive media created in Electrifier Pro or LiveStage DR is almost independent of the platform, offering a write-once, run-anywhere scheme unparalleled in its ease of use and potential customer base. Both can also use any existing QuickTime codec, including Sorenson's and QDesign Music's, to output movies with impressively small file sizes.

Electrifier Pro was the first QuickTime 3–based product to grab developers' attention. It has an outstanding object-oriented interface. Nearly every effect or action in the application is a mere click-and-drag away. You select Electrifier's actions and effects from a library palette called the Modifier window. While the actions (including basic navigation and control and the more powerful Open URL and QTVR controls) are best described as functional, the effects list is far more impressive, with ink, paths, zooms, animated perspectives, and audio effects such as sweep and fade.

Working with the Modifiers is easy. Each one has a unique icon that displays within a sprite's bounding box as you apply the Modifier. You can change variables for a Modifier by clicking its icon and editing attributes, such as location or perspective, in the Inspector window. The Inspector provides details about every element in an Electrifier movie, including track, sprite, and Modifier information. The combination of the Modifier and Inspector windows offers excellent control over a movie.

Electrifier Pro supports virtually every graphic, video, and sound format available, including bitmaps, vector graphics, AIFF, MPEG 1 and 2 audio, 3DMF, MIDI, animation, AVI, and traditional QuickTime video. This versatility makes Electrifier useful to Web developers working with any type of media a QuickTime movie can contain, regardless of format or development platform.

Electrifier Pro's navigation tools are simple, with basic play, stop, and loop actions. Although you can create an interactive presentation with these tools, the program is far more suited to industrial-strength QuickTime VR or animation work. You must stitch together VR scenes in another application, but you can use Electrifier Pro to create multinode movies quickly and easily. Each node is a VR panorama you can link so that users can navigate from node to node.

Electrifier's animation prowess comes from its ease of use and its strong lineup of drag-and-drop special effects and transitions. Combined with robust time-synchronizing

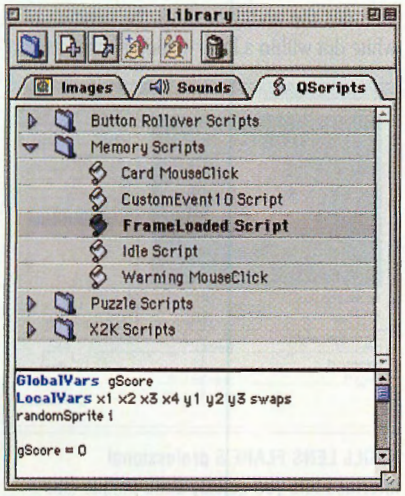
tools, these effects allow you to create complex animations. Three of Electrifier's most impressive effects—although they're technically part of the QuickTime 3 architecture itself—are Fire, Ripple, and Cloud. Fire and Cloud, of course, create dynamic fire or clouds in a movie. Ripple is a water effect that lets you apply waves to an image and make ripples in real time.

Overall, Electrifier Pro is an outstanding product that carves a significant niche for itself in the world of QuickTime and animation authoring. With its minimal navigation and interactivity tools, it's not meant for serious interactive development, but it can replace many of the functions of Macromedia's Flash and Shockwave. Electrifier's biggest drawback is its price—a whopping $595, which puts it right up there with Director 7.

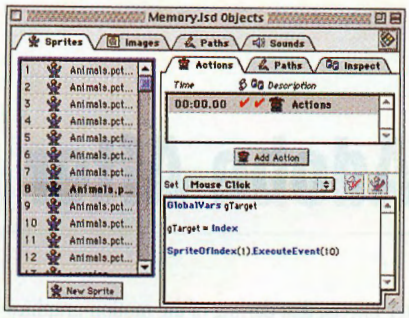
LiveStage DR, also based on QuickTime 3, focuses on interactivity. It sacrifices ease of use and powerful effects to deliver a custom scripting language and strong tools for creating interactive experiences in much the same way as Shockwave.

Like Director and Shockwave, LiveStage is an authoring environment, and it's no cinch to master. Work takes place on a sprite-populated stage. The sprites can be graphics, paths, sounds, or video, and they behave according to scripts executed by event handlers (such as "mouse click" or "frame loaded").

Scripting in LiveStage DR is where the learning really begins. QScript, a language Totally Hip created for LiveStage, provides access to the capabilities of QuickTime 3's wired sprites and allows complex if-then-else statements, custom handlers, local and global variables, and a number of other commands and properties. Once you master QScript, LiveStage is nearly as powerful as Shockwave.



THE LIBRARY WINDOW keeps track of media or scripts you'll use in multiple projects.



FROM LIVESTAGE'S MAIN WINDOW, the user has instant access to the scripting window, as well as to the sprites, paths, and media elements a project includes.

To make the language seem less overwhelming, LiveStage has a QScript Reference window broken into three categories: Actions, Properties, and Other. Actions include commands that directly affect a sprite, such as position or layering. Properties are values such as visibility or volume, and Other refers to operators and scripting to manage variables. You can type any of these scripts into the window or drag them from the QScript Reference palette.

The Library window is LiveStage's project management tool. You can load any folder, graphic, sound, or script into the Library for later use, no matter where the data exists on a hard drive. The Library provides a place for code or graphics you use over and over again in multiple projects; you can retrieve it from there regardless of what movie you are working on.

LiveStage has access to any graphic or audio format you can use with QuickTime; it also offers the same output options. As an animation and QuickTime VR tool, LiveStage works well, with precise control of VR panorama nodes, paths, and many effects such as scaling and stretching. However, most of the precision lies in the QScript coding.

To make LiveStage DR irresistible, Totally Hip is selling it for an amazingly low $199. If the price isn't a big enough incentive, LiveStage also comes with Totally Hip's WebPainter 3, a Web graphics and animation application (see *Reviews*, Nov/98, p72). Considering the versatility of LiveStage DR, $199 is a steal.

LiveStage isn't flawless. It's currently in what Totally Hip calls a "developer release"—with the expectation that experienced Web pros and other early adopters will buy and use the product first. For average consumers, this means that the manual is still a work in progress, and LiveStage is a bit buggy and just shy of being rock-solid stable. It also doesn't have the user feedback, such as cursor changes over hot spots, that's evident in more mature environments like Shockwave.

THE QSCRIPT REFERENCE IS A DRAG-AND-DROP VISUAL GUIDE to all the scripting syntax available in LiveStage's custom language.

Although both products are based on the same QuickTime 3 technology, they serve very different types of users. Electrifier is best suited to developers looking for a powerful but easy-to-use application that lets them create a mildly interactive delivery vehicle for linear QuickTime movies or to add visual flair to ad banners and animations. LiveStage is a self-contained development environment appropriate for creating fully interactive Shockwave-style movies with strong, nonlinear user interaction.

Bottom line: Macromedia Director users looking for a QuickTime-based alternative should try LiveStage DR. Presenters and ad-banner creators should go with Electrifier Pro.—*Rick Sanchez*

LiveStage DR 1.0.1

GOOD NEWS: Robust scripting language. Lots of tools to create deep interactivity. Plays back on any machine with QuickTime 3. Low price. **BAD NEWS:** A little buggy. Manual is a work in progress.

Electrifier Pro 1.0

GOOD NEWS: Outstanding user interface. Impressive special effects. Excellent QTVR controls. Plays back with QuickTime 3. **BAD NEWS:** Expensive. Limited amount of interactivity.

Plug-ins for Adobe After Effects

DESIGN & GRAPHICS

Like its popular sibling Photoshop, Adobe After Effects, that darling of the motion-graphics set, has spawned a whole mini industry of plug-ins, expanding its already impressive capabilities in ways ranging from the mundanely useful to the mind-bendingly bizarre. We looked at three hot plug-in suites from Artel, Puffin Designs, and Atomic Power.

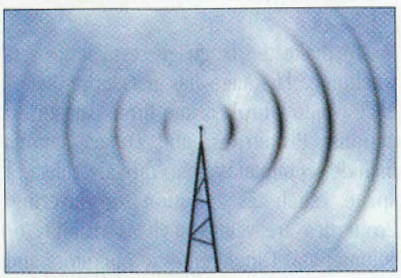
Boris AE 2.0

COMPANY: Artel Software
CONTACT: 888-772-6747, http://www.borisfx.com
PRICE: $495 (SRP)
REQUIREMENTS: Adobe After Effects or another application compatible with After Effects plug-ins

FIND DEMOS OF all the plug-ins mentioned in this review on The Disc.

Boris FX made a name for itself bringing DVE (digital video effects—you know, video cubes, video walls, page turns, and so on) to Adobe Premiere. Boris AE includes more-sophisticated versions of those for After Effects, along with 39 other bread-and-butter filters.

Boris AE's five Perspective filters include the flashy video stuff. Boris AE's DVE let you tumble any image along x-, y-, and z-axes, with a selectable pivot point; an adjustable camera, lighting, and shadows; and other parameters you can tweak. It's like After Effects' Basic 3D filter, but a lot better. BAE Cube, BAE Sphere, and BAE Cylinder can map video onto floating geometrical shapes. This trick is pretty old, but at least Boris AE has got it down to a science, with such niceties as antialiased mapping seams and the ability to map different images on the inside and outside of the shape.



ANIMATE YOUR OWN PIRATE TRANSMITTER with Boris AE's Ripple filter.

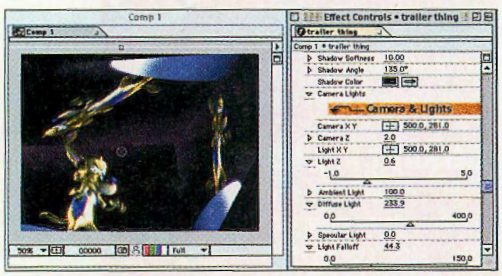
The rest of the filters are mainly subtle improvements on functions After Effects already handles. For example, there are 11 color-correction and compositing filters, of which only BAE Posterize, BAE MultiTone Mix, and BAE Artist's Poster do color reduction tricks that After Effects completely misses. Boris AE's versions can often save you time, though. BAE Color Correction combines the functions of three After Effects filters—Color Balance, Levels/Gamma, and HSL—and provides controls like those on a video processing amp, which should make hard-core videoheads happy.

Our nomination for best Boris AE filter was actually one of the simplest: Blur. Unlike After Effects' unintelligent Blur filter, the Boris version recognizes the edges of the frame so you don't get a transparent area blurring into the image from the edge. You also have separate blur controls for the x- and y-axes. And the process is much faster.

Sure, Boris AE may not make your blood race—but it gets the job done.

More 3D in AE 3.0

At press time, Artel had just released Boris AE 3.0. The new version adds more particle system effects and more 3D effects (including 3D text), and works better with After Effects 4.0's interface redesign.



BORIS AE MAKES THESE ROTATING VIDEO CUBES look good with adjustable lighting and mapping.

GOOD NEWS: Boris AE versions of standard After Effects filters are generally better. BAD NEWS: Video cubes are so late eighties.

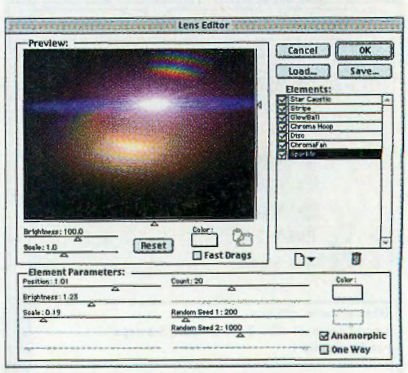
Knoll Lens Flare Pro

CONTACT: 415-331-4560, http://www.puffindesigns.com
PRICE: $295 (SRP)
REQUIREMENTS: Adobe After Effects or another application compatible with After Effects plug-ins

Lens Flare Pro is the de facto tool for professional lens flares. John Knoll (who wrote the basic code for Adobe Photoshop) created it for internal use at Industrial Light & Magic (ILM), where he's a visual effects supervisor. You can see Lens Flare Pro at work in any number of ILM's effects in films, including *Star Wars Episode 1: The Phantom Menace,* so it's definitely got the leg up on its competitors in sheer prestige.

But prestige isn't the point. Lens Flare Pro produces the most believable lens effects and glows we've ever seen. It runs rings around the canned flares you get with After Effects' standard Lens Flare plug-in (although you can emulate that look as well).

The key to Knoll Lens Flare's advanced control is its ability to build unique flares out of a set of Flare Primitives, which mimic the visual artifacts of common lens distortions and chromatic aberrations. These include many types of halos, rings, and interior lens reflections, plus some unusual ones like Chroma Hoops and Photon Torpedo Spikes. The interface is quick and professional, and it includes the ability to track the position of a white dot within a layer, making it very easy to

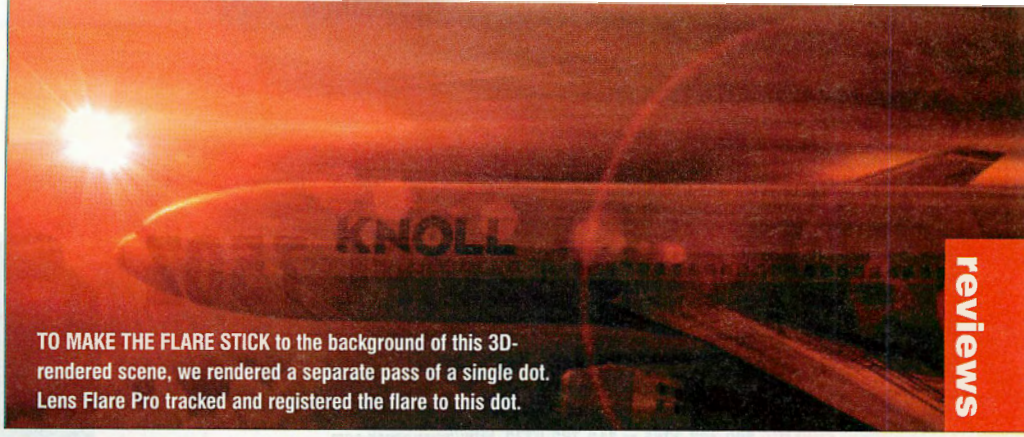


KNOLL LENS FLARE'S professional interface lets you quickly build unique lens effects that leave the traditional Photoshop 35mm flare in the dust.

link the position of a flare to an element in real footage such as a flame or explosion.

Frankly, you can spend hours playing with this tool (and pick up some insight into the construction of real lenses in the process). We highly recommend it.

GOOD NEWS: Ultimate flare, glare, and dazzle tool. What Knoll used on *Star Wars Episode 1: The Phantom Menace*. **BAD NEWS:** None.



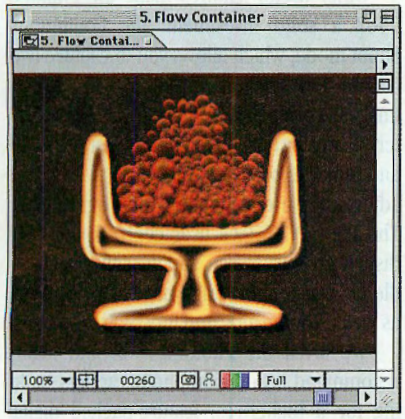
TO MAKE THE FLARE STICK to the background of this 3D-rendered scene, we rendered a separate pass of a single dot. Lens Flare Pro tracked and registered the flare to this dot.

Evolution 1.0

CONTACT: 415-331-4560, http://www.atomicpower.com
PRICE: $295 (SRP)
REQUIREMENTS: Adobe After Effects or another application compatible with After Effects plug-ins

From the neutron-sleeted brains at Atomic Power Corporation comes Evolution 1.0, a set of 14 effects filters with some powerfully sophisticated math behind them.

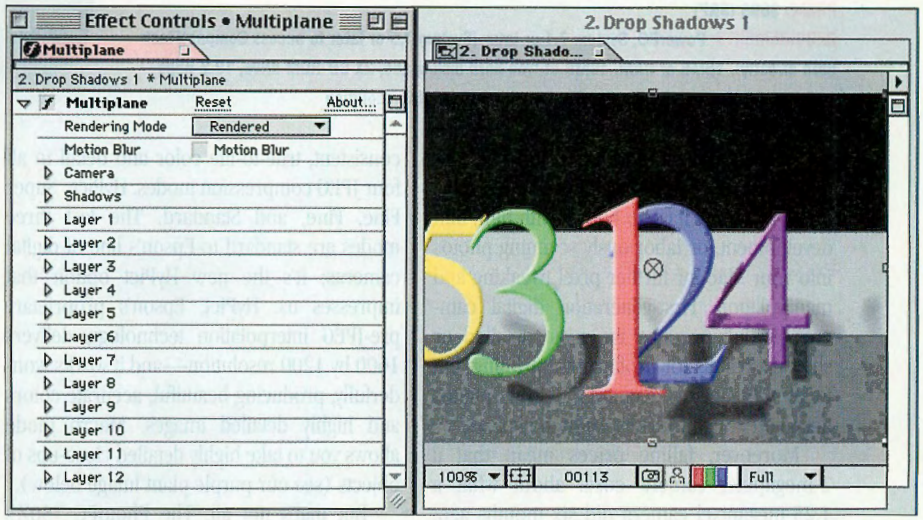
The Turbulator is a fractal-based displacement system for simulating clouds, fire, smoke, and other gaseous or liquid masses. Unlike other mass particle systems, Turbulator gives you fine control over exactly how the fractals move. By animating several effect points to shape the fractal mass precisely, you can make your cloud or smoke roil in the desired manner, then dissipate and drift away in the proper direction.



SUDS COURTESY OF Evolution's Foam filter.

If it's water you want, Evolution also has what we believe is the first caustics implementation on the Mac. Caustics refers to the complex interaction of reflection and refraction in a body of water. Use the Caustics plug-in with the Turbulator or Evolution's Wave World plug-in to generate quite believable water effects.

People who prefer to blow things up will love Evolution's new twist on that technique. The Shatter filter extrudes a layer along the z-axis, then lets you blow the layer into smithereens. You can define a shock wave or animate a force point to destroy the layer bit by bit, and even set the shape of the pieces with a shatter map.



WITH EVOLUTION'S MULTIPLANE FILTER, you can shuffle these letters in front of or behind each other and cast accurate shadows.

Those animators will also salivate over the Multiplane filter, the first to emulate a true multiplane animation camera in After Effects. Position layers precisely anywhere in 3D space, including along the z-axis, then have them cast accurate shadows on each other. The fully animated camera supports depth of field, so layers come into and out of focus as the camera moves past them.

Boris AE takes the prize as the most practical set of tools we tested. Measured according to coolness quotient, however, it drops out of the running. In that contest, Evolution edges out Knoll Lens Flare Pro by the merest of fractal hairs.—*Steve Anzovin and Raf Anzovin*

GOOD NEWS: Incredible multiplane tool. Clever 3D disintegrators. Only caustics tools on the Mac.
BAD NEWS: Some filters are slow to render.

Digidelirious

No AE plug-in developer has been busier than DigiEffects (888-344-4339, http://www.digieffects.com), with its ever-growing list of cool add-ons. We were anxious to get our hands on Delirium, the company's latest suite of 35 filters, but it wasn't ready for release. Don't let that stop you from checking out these other DigiEffects offerings.

Aurorix 2 ($289) Offers 26 video effects for After Effects, including old movie, lighting, distortion, media simulation, and pattern and texture generation.

Berserk ($289) Has 20 distortion and particle effects, including Blizzard and FogBank.

Cyclonist ($495) More organic particle effects for creating natural phenomena such as fire and rain.

CineLook ($695) Make your video look like you shot it with any of 50 popular motion-picture film stocks, or deconstruct it with authentic-looking FilmDamage.

Epson PhotoPC 750Z

HARDWARE

COMPANY: Epson America
CONTACT: 800-463-7766 or 310-782-0770, http://www.epson.com
PRICE: $699 (SRP)
REQUIREMENTS: PowerPC, System 7.1 or later (System 7.5 or later to access CompactFlash card directly), 16MB of RAM, 40MB of free hard disk space, 2X CD-ROM drive, 19.2-Kbps serial port or faster, 16-bit color display with 640 by 480 resolution

Photo by Aaron Lauer

THE PHOTOPC 750 IS A LITTLE BIG for a digital camera—but it offers big features, including a 1.92-megapixel resolution.

Digital photography has distinct advantages over traditional film photography: You don't have to bother with film, film development, or laboriously scanning photos into your Mac for further pixel tweaking and manipulation. First-generation digital cameras didn't produce the most detailed or sharpest results for professional printing, but today's higher-res cameras deliver photos detailed enough for 8-by-10-inch glossies.

Moreover, falling prices mean that a 2-megapixel camera costs about what a 1.25-megapixel camera did six months ago. Epson's new PhotoPC 750Z costs the same as its PhotoPC 700, which we also reviewed (Sept/98, p59). Yet the PhotoPC 750Z has greatly surpassed the 700 with its resolution of almost 2 megapixels and its abundant features, while maintaining its predecessor's image quality and accuracy.

In our field tests under extremely bright light conditions, the PhotoPC 750Z produced consistent, true-to-life color and detail in all four JPEG compression modes: HyPict, Super Fine, Fine, and Standard. The last three modes are standard to Epson's line of digital cameras; it's the new HyPict option that impresses us. HyPict, Epson's proprietary pre-JPEG interpolation technology, delivers 1600 by 1200 resolution—and it works wonderfully, producing beautiful, accurate colors and highly detailed images. Macro mode allows you to take highly detailed close-ups of objects (see our purple plant image below).

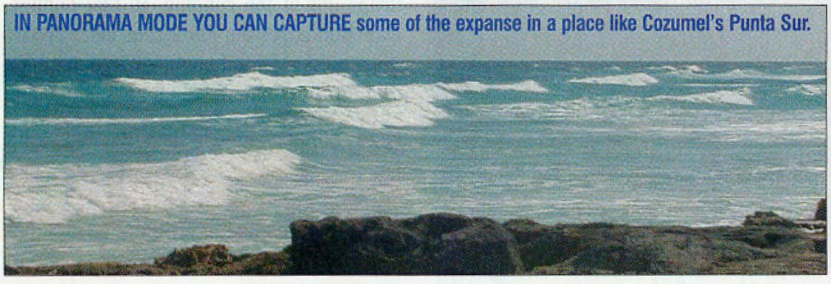
But that's not all. The PhotoPC 750Z's other hit features are its maximum 6X zoom, achieved through a 3X optical zoom combined with a 2X digital zoom; the Solar Assist panel, which saves battery life by allowing sunlight or fluorescent light to power the LCD; and direct printing to the majority of Epson color inkjet printers, such as the Stylus Photo EX and Stylus Color 740—you don't need a Mac to print your images. In our tests, we found the 6X zoom especially useful for capturing faraway subjects, even moving ones. But you must time your shot well, as digital cameras require a longer depression of the shutter button. The Solar Assist panel worked much better in sunlight than in fluorescent light. However, its battery-saving function is definitely a cool feature and makes the PhotoPC 750Z worth recommending over digital cameras lacking that option.

Other useful features make the PhotoPC 750Z a solid investment: the Continuous Shoot mode, which allows you to capture two 640-by-480 images per second, up to 16 images; Power Save mode, which saves battery power by turning off the camera and LCD; and Auto Exposure mode, which lets you adjust exposure manually by plus or minus 2. The PhotoPC 750Z's user controls and LCD display are easy to use, and the software bundle facilitates uploading images to your Mac, as well as organizing and touching up photos.

We loved the PhotoPC 750Z and highly recommend it to digital photographers looking for a higher-res, feature-packed digital camera. Its only downside is its bulky form (a result of including the Solar Assist panel). But overall, this is a *great* camera.—*Jennifer Ho*

COZUMEL'S NATIVE PURPLE PLANT makes a beautiful subject in Macro mode.

BRIGHT CARIBBEAN SUN poses a challenge, but the PhotoPC 750Z handled it well.



IN PANORAMA MODE YOU CAN CAPTURE some of the expanse in a place like Cozumel's Punta Sur.

GOOD NEWS: Low-compression HyPict mode produces 1.92-megapixel resolution. Solar Assist panel powers the LCD with sunlight or fluorescent light power instead of batteries. 3X optical and 2X digital zoom make a nice 6X zoom. Prints directly to most Epson Stylus Photo or Stylus Color inkjet printers. Displays photos on a TV or VCR via included video cable. 12MB of memory. **BAD NEWS:** Image Authentication System security software available only for the PC. Bulky form factor.

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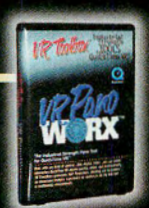

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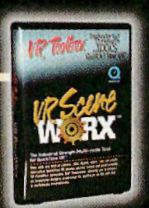

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Hitachi GF-1050 DVD-RAM

HARDWARE

COMPANY: Hitachi
CONTACT: 800-448-2244 or 650-244-7610, http://www.hitachi.com
PRICE: $799 (SRP)
REQUIREMENTS: 68040 or faster processor, System 7.5 or later, 16MB of RAM, empty internal drive bay, internal SCSI

ALTHOUGH IT LOOKS LIKE AN INTERNAL CD-ROM DRIVE, the GF-1050 does a whole lot more, such as storing 5.2GB of your stuff on one $40 cartridge.

Photo by Aaron Lauer

For those who want the cutting edge in storage, DVD-RAM is here—and it works on a Mac. The Hitachi GF-1050 internal DVD-RAM drive provides rewritable storage at $40 for a 5.2GB cartridge; reads audio CD, CD-ROM, CD-R, CD-RW, and DVD-ROM media; and reads and writes DVD-RAM discs. But you'll pay to play—the drive costs $799 without any software, so you'll fork over even more dough for drivers. Hitachi doesn't bundle any; you'll need a third-party utility such as Software Architects' DVD-RAM TuneUp 2.0 (see the sidebar review).

We had no problems installing the GF-1050—which is saying a lot, considering that it's an internal SCSI device and they're usually a challenge to install. We just dropped it in place of an existing CD-ROM drive, plugged in the SCSI and power cables (the GF-1050 is a SCSI-2 device), closed up the case, restarted, and installed the driver software. The drive perked right up and went to work.

The GF-1050 reads audio CDs, CD-Rs, and regular CD-ROMs with no problem. Using DVD-RAM TuneUp, we easily formatted and mounted DVD-RAM cartridges. Once formatted, the cartridges show up as regular Mac volumes; you can even copy files to and from the cartridges. We encountered some minor problems with formatted DVD-RAM media. Occasionally DVD-RAM cartridges would fail to mount, and we'd either have to restart or force the cartridge to mount using DVD-RAM TuneUp.

Data transfers are slow—especially when writing to a cartridge—but that's par for the course with DVD-RAM. The drive's maximum transfer rate when writing data to a cartridge is 1.38 MBps—hardly enough to saturate a SCSI connection. But right now DVD-RAM is about size, not speed, and it's still faster than CD-RW drives. At $40 for a 5.2GB cartridge, you can't find a better deal on mass storage. One oddity users of 5¼-inch floppies will find familiar is having to flip the DVD-RAM cartridges (side A and side B) to get the full 5.2GB (each side holds 2.6GB of data). That amount of storage saved some serious data from loss when we had a head crash later that week.

The GF-1050 will become more attractive to Macintosh users if two things happen: First, Hitachi must ship the drive with Mac software; second, DVD decoders must become available for the Mac, making the GF-1050 a realistic replacement for internal CD-ROM drives. Right now, though—unless you need lots of cheap removable storage or you just can't stand not being on the cutting edge—you'd do well to wait until the price comes down and the features for Mac users grow.—*David Reynolds*

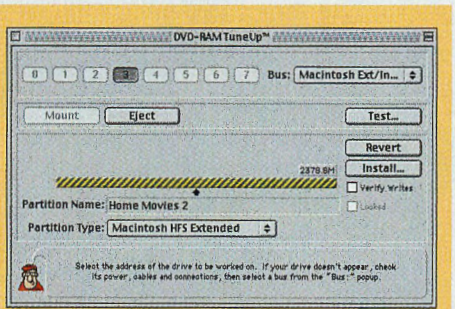
GOOD NEWS: Tons of cheap storage. Works well as an audio CD, CD-ROM, or DVD drive. Easy installation compared to other internal SCSI devices. BAD NEWS: Slow data transfer rate. Can't handle DVD movies yet. Doesn't ship with any software—including drivers.

DVD-RAM TuneUp 2.0

COMPANY: Software Architects
CONTACT: 800-863-9297 or 425-487-0122, http://www.softarch.com
PRICE: $99.95 (SRP)
REQUIREMENTS: 68040 processor or faster, System 7.5 or later, 16MB of RAM, SCSI or ATAPI DVD-RAM drive (Hitachi, Panasonic, or Toshiba)

So you have your DVD drive, but what do you do with it? The Hitachi drive doesn't yet ship with Mac drivers, and Apple drivers may not work when they're dealing with some aspects of the drive, such as writing to UDF volumes (the Mac OS only supports reading, not writing). Software Architects' DVD-RAM TuneUp 2.0 fills the gap.

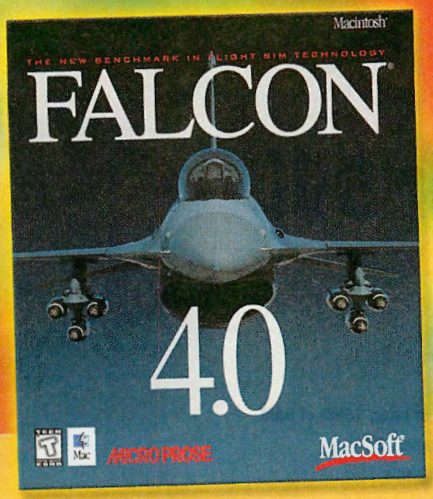
Installing and using DVD-RAM TuneUp 2.0 is easy. The new software goes to work immediately. It reads CD-ROMs, CD-Rs, CD-RWs, and DVD-ROMs, and reads and writes DVD-RAM media. DVD-RAM TuneUp 2.0 seamlessly switches among the various media as you drop them into the drive; each one shows up in the Finder correctly. DVD-RAM TuneUp 2.0 allows you to format new media, perform some tests, and adjust the DVD-RAM's caching abilities, which should speed up some disk operations. Unfortunately, because of the lack of alternative DVD-RAM drivers, we couldn't test how caching affected the drive's speed.



THE SIMPLE, MAC-LIKE INTERFACE is a pleasure to use, and it exposes most of DVD-RAM TuneUp's features for easy access.

DVD-RAM TuneUp 2.0 handled the Hitachi drive wonderfully. We had occasional trouble with disks not mounting on the desktop, but we couldn't pin down the source of this intermittent problem. A restart usually cured it; we also used the DVD-RAM TuneUp interface to mount the volume manually.—*David Reynolds*

GOOD NEWS: Easy to install and use. BAD NEWS: Intermittent problems with mounting volumes.



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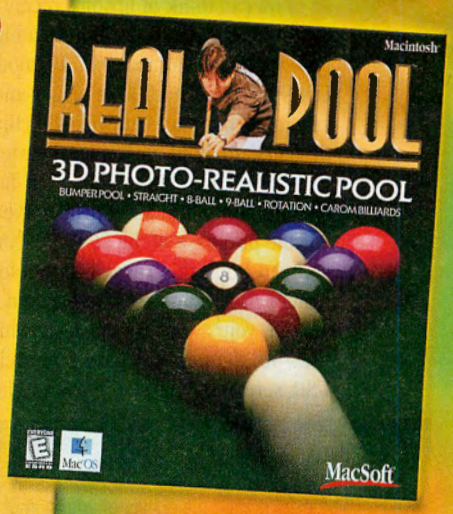

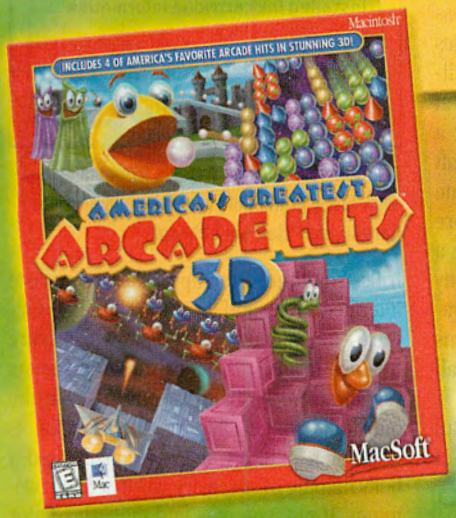

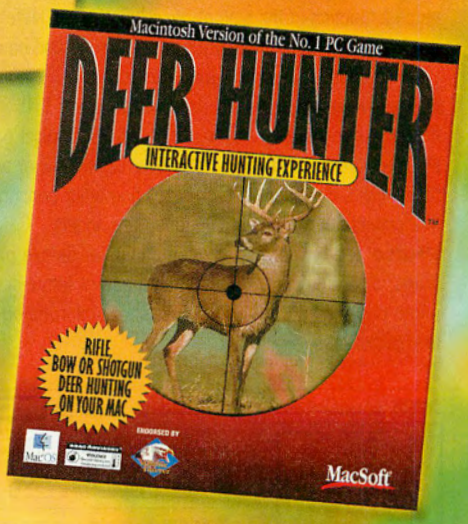

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reviews

Stylus Color 900

HARDWARE

COMPANY: Epson America
CONTACT: 800-463-7766, http://www.epson.com
PRICE: $449 (street)
REQUIREMENTS: 68040 or faster, System 7.5.1 or later, 16MB of RAM 32MB recommended), 50MB of free hard disk space, 2X CD-ROM drive (4X recommended), serial or USB cable

Photos by Aaron Lauer

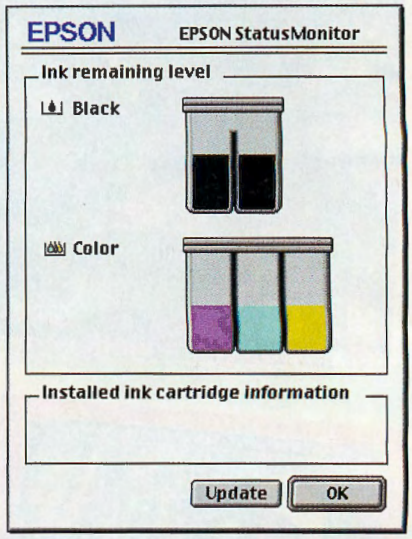
THOUGH IT'S BIGGER AND BULKIER than its older sibling, the Stylus Color 900 is faster and produces a sharper image.

You can think of Epson's recently introduced Stylus Color 900 as a big brother to the company's 740 model (see Feb/99, p48). The 900 is bigger and bulkier, cranks out pages at twice the clip, and is designed to hold up under heavier usage than its chipper little sibling. In fact, with the addition of the $239 print server option (or the purchase of the $649 900N model), you can hook this rugged four-color inkjet printer to an Ethernet network and share it among your workgroup. Meanwhile, like the 740, the new guy gives you a choice of USB, serial, and parallel ports and kicks out gorgeous high-resolution color prints.

In fact, the Stylus Color 900's printing quality is a teensy bit better than that of the already drool-inducing 740. Sporting the same 1440-dpi maximum resolution and Micro Piezo technology as the earlier printer, this model squeezes the minimum ink-drop size down to 3 picoliters, versus the 740's 6. In practical terms, this means its output is noticeably sharper, particularly on the low end of the paper food chain. The 900 also seems to go a bit lighter on the ink, making it a lot easier to make out details in dark areas—a difference you'll discern even in high-resolution photo-quality prints on glossy 50-cents-a-sheet photo paper.

While you may have to squint to notice the 900's improvements in image quality, it's easy to quantify its speed advantage. Across the board, this sturdy printer jams out pages two to three times faster than the 740. A full-page color image ranges from 45 seconds at 360 dpi on plain paper to 4 minutes for a 1440-dpi print on photo-quality paper. Draft text pages on plain paper pop out at a rate of about six per minute, though at the more presentable high-quality setting they take a minute apiece. All in all, the 900 is pretty darn zippy, making it worthy of consideration for impatient color printing mavens even if they don't have a workgroup to call their own.

While the Stylus Color 900 is a powerful little printing package, you don't get a lot of frills. You'll need to supply the appropriate interface cable, and there's no bundled software (though you get to pick two software freebies from a six-item list with members ranging from Virex to Warcraft II). For the individual inkjet shopper, the question is whether a little bit of image quality and a hefty helping of speed are worth a $200 premium. If not, you may find the Stylus Color 740 and Epson's other consumer offerings a better buy.—*Mark Simmons*



ARE WE THERE YET? Epson's Print dialog box even lets you monitor your ink consumption. Careful, that stuff ain't cheap!

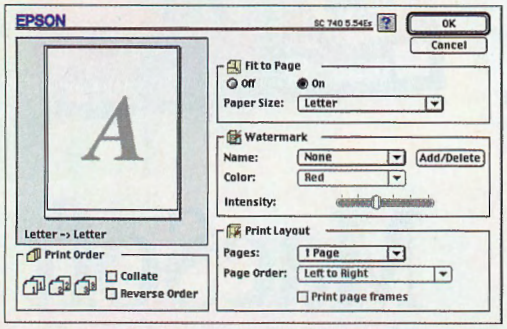
You're So Money

With a color inkjet printer, the quality of your output is very much a function of the type of paper you feed it. Here's a quick rundown of some of your paper options and how far your hard-earned cash will go in each case.

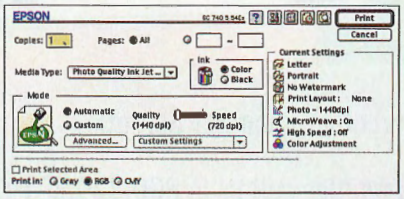
Inkjet Paper Your standard printer paper: $10 should get you a 500-sheet ream of letter-size inkjet paper.

Photo-Quality Inkjet Paper Coated paper with a matte finish, designed for high-resolution color printing; $10 covers approximately 100 letter-size sheets.

Photo Paper Thick, glossy paper for deluxe photo prints; $10 snares you a 20-sheet pack of letter-size photo paper, with the 4 by 6 snapshot size running a few bucks less.



WATERMARKING, TWO- AND FOUR-UP PRINTING, and many other layout options await you in the depths of the multitalented Print dialog box.



EPSON'S PRINT DIALOG BOX is truly a marvel to behold. Here you can set ink and quality options, review settings, and even run printer diagnostics.

GOOD NEWS: Even nicer output than 740 model's. Twice as fast. Printing sound is relatively quiet and pleasant. Ethernet and PostScript upgrade options. BAD NEWS: No cables or bundled software. Takes a while to print decent text pages.

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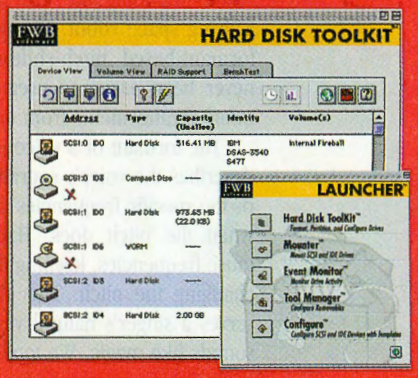

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Harmony 1.0

AUDIO

COMPANY: Arboretum Systems
CONTACT: 800-700-7390, http://www.arboretum.com
PRICE: $349 (SRP)
REQUIREMENTS: PowerPC 200MHz or faster, Mac OS 8.0 or later, 22MB of free RAM, HyperEngine 2.4.2 or later (included)

FIND A DEMO of Harmony on The Disc.

Harmony 1.0 is an indispensable new audio plug-in that corrects pitches and generates new harmonies without the results sounding like Alvin the Chipmunk or a dying space robot. Thanks to Harmony's formant-based pitch-shifting process, it's never been easier to create complex harmony arrangements from one vocal line.

The formant of a voice is the sound that describes the voice's overall characteristics, or the specific frequencies that don't change when the pitch does. Harmony identifies those frequencies, keeping them intact while changing the pitch. The plug-in also preserves a singer's natural vibrato. The result sounds like magic. We took a rather poorly sung phrase, corrected a few pitch problems, and transposed the note line an entire octave higher (a range usually well into singing-chipmunk territory), and the new phrase sounded as though the singer had performed it himself. Adjust the Formant Shift and Humanize settings and you can practically create a whole new singer from your own vocal track, then have that "new guy" sing up to seven harmony parts with you.

Speed Traps and Tricks

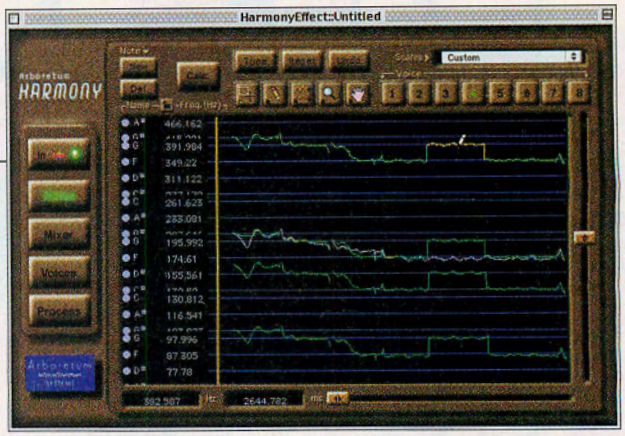
Harmony can generate up to eight parts, but your Mac's clock speed limits the number of voices you can hear in real-time preview mode. A G3 or an iMac will have no problem handling eight voices. A 200MHz 604e machine may have trouble with four, but there are ways to squeeze more voices out of slower machines.

Preview It Run in Preview mode. You trade off monitoring sound quality for increased performance.

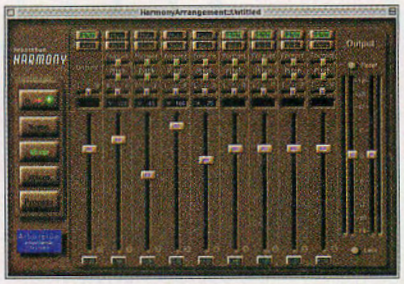
Increase the RAM Make sure to allocate enough memory to HyperEngine in its Get Info window. 42,000K is a good place to start.

Ditch the Shift Don't use the formant shifting function.

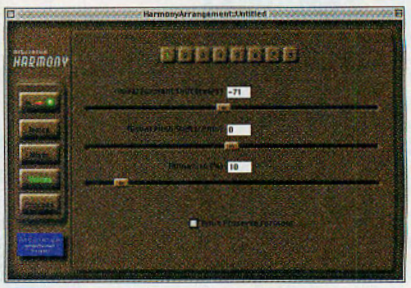
No Adjustment Needed Don't adjust the Humanize parameters.



IN THIS NOTE WINDOW YOU SEE the original vocal line (second from the top) and three harmony parts we created. On a held note in the phrase, we raised the pitch in each line to get a strange vocal effect like the one Cher uses in her song "Believe."



IN THE MIXER YOU SET the levels of harmony parts, tweak formant and pitch settings, and assign left and right positioning if you want to save the arrangement as a stereo file.



IN THE VOICES SCREEN YOU CAN ADJUST Harmony's precise formant ("throat size") and pitch settings. The Humanize factor adds warble and is great for keeping harmonies from sounding unrealistically perfect.

Harmony 1.0 ships with HyperEngine, an audio-editing program that hosts the plug-in. Arboretum expects to implement support for VST (an audio plug-in format) soon, so you'll be able to use Harmony in any VST-compatible application. There is custom support for Apple's built-in sound hardware via Sound Manager, the Korg 1212 I/O, and Digidesign's Audiomedia II and III cards. Harmony doesn't support older Macs with G3 upgrade cards.

The Harmony interface consists of four easy-to-use windows: Note, Mixer, Voices, and Process. The well-designed Note window is where you do most of your editing. Select or create a scale here, and automatically correct the pitch of your audio to that scale. Use the Pencil tool to smooth a scooped note. Zoom in for superfine control of pitch frequencies. Drag a selected line of notes up to a new pitch to generate a harmony. By the time you read this, Arboretum expects to have a library of auto harmonies and 2,000 user scales available for Harmony at no extra cost.

It has never been so easy to create and arrange lush, realistic vocal harmonies in digital music. We've tried dozens of pitch-shifting schemes before, and nothing has come close to Harmony's accuracy and realism. This invaluable tool not only shines in vocal production but is perfect for generating harmonies for any melody. We also used Harmony to turn a frog's croak into a sci-fi monster's grunt, change a declarative line of dialogue into a question, and transform a serious announcer into a silly cartoon character.

Harmony's processing demands real CPU speed. Fortunately, owners of slower Macs can make some sacrifices in how they hear previews. For example, saving the file and reopening the processed sound in HyperEngine lets you hear the high-quality results Harmony is so good at producing. If you have a G3 and need great arranging and pitch control for vocal, music, or general sound production, you want Harmony.—*Judy Munsen*

GOOD NEWS: Amazingly realistic formant-based pitch shifting and harmony arrangement. Formant, Pitch, and Humanize features allow unprecedented control of vocal characteristics.
BAD NEWS: Requires a lot of processing power. Version 1.0 operates only in HyperEngine.

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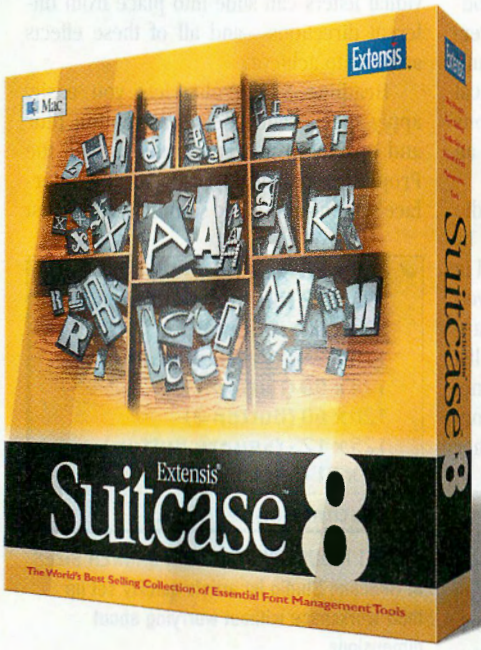
8.5 Compatible



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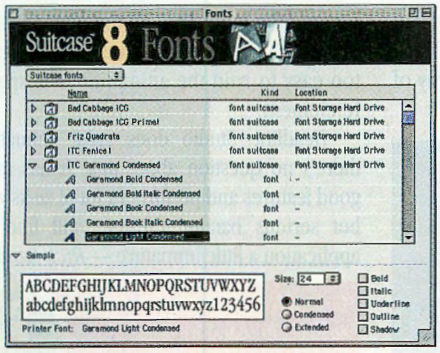

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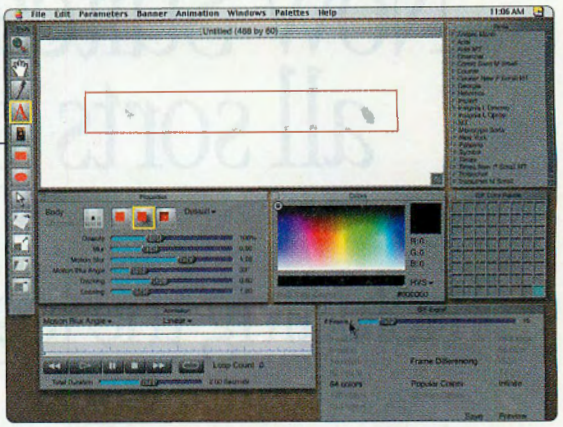
SUMANA010399

Headline Studio 1.0

DESIGN & GRAPHICS

COMPANY: MetaCreations
CONTACT: 805-566-6200, http://www.metacreations.com
PRICE: $199 (SRP)
REQUIREMENTS: PowerPC, Mac OS 8.0 or later, 32MB of free RAM, 5MB of free hard disk space, CD-ROM drive

FIND A DEMO of Headline Studio on The Disc.



HEADLINE STUDIO IS designed to do one thing: create Web ad banners. All the tools and palettes in Headline Studio make banner creation easy.

The Web has matured into both a content platform and a vehicle for delivering advertising. While Adobe and Macromedia have addressed most graphical content developers' needs, MetaCreations believes its new Headline Studio fills an overlooked niche—ad banner creation.

MetaCreations designed Headline Studio to make banner creation fast and easy by incorporating a number of features found in competing software packages and by developing unique new functions. You begin banner creation by selecting from a preset list of banner sizes that include Internet Advertising Bureau standard ad sizes. From there, Headline Studio can bring together bitmapped graphics, text, and animation to create banner advertisements quickly.

Headline Studio 1.0's greatest strength is its text-handling capabilities. Control of motion animation is easy—you just set keyframes and move the text to the appropriate location. Animation options such as ease-in and ease-out add more finesse to movement. You can also set other movement controls and animation duration from Headline Studio's Animation palette.

More impressive than standard movement control, though, is the way Headline Studio can break up text into individual words, characters, or lines, then animate the individual pieces. A sentence can appear as real-time typing into the banner, or individual letters can slide into place from different directions—and all of these effects are easy to achieve.

Headline Studio also lets you easily apply special effects such as motion blur and opacity to text and graphics with the Properties palette. Thanks to the interface's point-and-click simplicity, an artist can set a graphic's shadow in a specific direction, a motion blur and its direction, and image transparency. The Properties palette also provides access to Photoshop-style inks, which Headline Studio calls Composite Options. From Composite Options, you can assign a graphic typical inks such as Screen, Multiply, and Hard Light, all of which open up a wide array of compositing options.

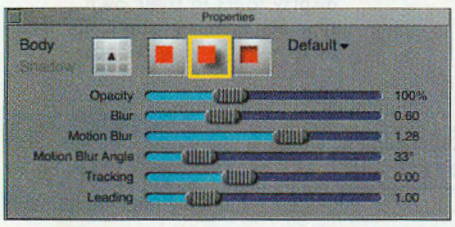
PRESET INDUSTRY-STANDARD BANNER SIZES in Headline Studio let artists quickly set up their workspace without worrying about dimensions.

Also on the plus side is Headline Studio's strong GIF Export palette. A slider controls the number of frames to export, and an easy-to-understand list of options simplifies selecting the number of colors, frame differencing, and dithering. The GIF Export window provides quick access to a preview function, which allows you to preview a banner at Internet connection speeds from 28.8 Kbps to T1.

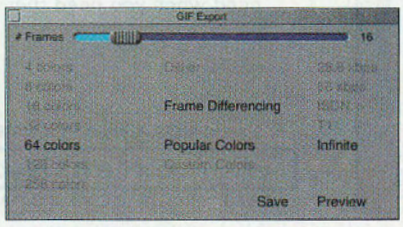
Other nice features include an intelligently designed text window that lists installed fonts with WYSIWYG hierarchical menus. A Color palette also provides quick access to any color in the spectrum, indicating whether the color is Web safe (accessible for both Macs and PCs in 256-color mode) and showing the color's hexadecimal code.

Despite its many strengths, Headline Studio 1.0 isn't as robust a tool for creating Web banners as other applications in the same price range. Specifically, Adobe ImageReady comes to mind. ImageReady's more intuitive management of kilobyte size and color palettes is the most important reason for recommending it over Headline Studio. Working with multiple animation layers is difficult in Headline Studio, as there is no window analogous to Macromedia Director's Score or ImageReady's Layers (the latter lists all the elements in a project). This shortcoming makes it far too easy to ruin the animation of a specific element.

Headline Studio does great animation; there's no question about that. It has many good features and performs a lot of tasks well, but serious banner creators will find the application a little immature.—*Rick Sanchez*



USING THE PROPERTIES PALETTE, YOU GET quick, easy control over effects such as Motion Blur, Screen, Multiply, and compositing inks.



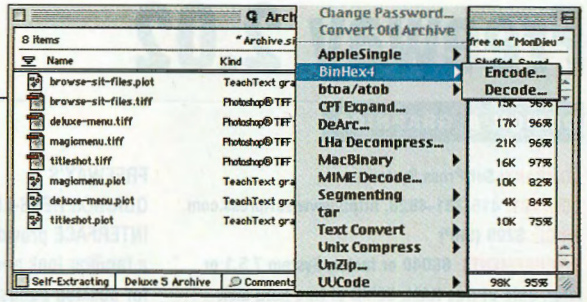
THE GIF EXPORT WINDOW PRESENTS you with all the optimization options at Headline Studio's disposal, so making small GIF banners is easy.

GOOD NEWS: Excellent animation control. Strong text-handling features. Lots of effects.
BAD NEWS: Weak handling of kilobyte size and color palettes.

StuffIt Deluxe 5.1

UTILITY

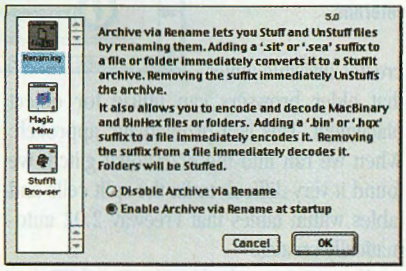
COMPANY: Aladdin Systems
CONTACT: 831-761-6200, http://www.aladdinsys.com
PRICE: $79.95 (SRP), $29.95 upgrade
REQUIREMENTS: 68020 or faster, System 7.5.3 or later, 8MB of free RAM, 8MB of free hard disk space



STUFFIT DELUXE MAKES using file compression on your Mac a snap.

With ubiquitous utilities such as StuffIt Expander and DropStuff, Aladdin has long reigned as the king of file compression. The free StuffIt Expander resides on the vast majority of Macs currently in use, and StuffIt files proliferate on Web and FTP servers. Aladdin's recently released StuffIt Deluxe 5.1 targets higher-end users who want more functionality than the simple DropStuff and Expander apps offer.

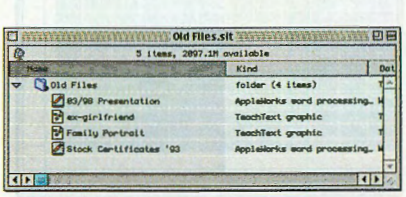
StuffIt Deluxe encodes, decodes, and converts over 15 different file formats, including AppleSingle, CompactPro, MIME, TAR, SEA, StuffIt, Zip, and more. If you work with unusual compression formats, odds are StuffIt Deluxe can help you. Within StuffIt Deluxe, you can selectively add, remove, rename, or otherwise manipulate items in an archive. However, the true power of this package comes not from StuffIt Deluxe itself, but from the True Finder Integration control panel and the Magic Menu contextual menu module (CMM).



IT DOESN'T GET MUCH SIMPLER than this. Control three key parts of True Finder Integration with this streamlined control panel.

True Finder Integration invisibly puts StuffIt power on your Mac's desktop. Renaming Myfile as Myfile.sit invokes StuffIt to compress the file. Rename the file Myfile.hqx, and you have an instant BinHex. You can also create SIT files by selecting files and pressing Command-S. Decompressing files is just as easy: Simply remove the suffix from the file name or press Command-U. These commands and more are available through the Magic Menu, which parks between your Special and Help menus in the Finder.

True Finder Integration doesn't stop there. One of the nicest features, the StuffIt Browser, allows you to treat SIT files as if they were normal folders. Need to grab just one picture from a StuffIt file containing a couple hundred? Just double-click the file and drag the desired picture out of the Finder-style window—there's no need to decompress the whole archive. StuffIt Browser won't work in open or save dialog boxes, but within the Finder it's a snap.



IS THIS A FOLDER? No, it's a StuffIt file. Browse SIT archives transparently with the StuffIt Browser component of StuffIt Deluxe.

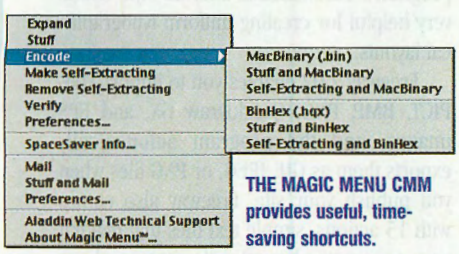
If those features don't make using StuffIt technology easy enough for you, consider Magic Menu's CMM. With one control-click on a file or folder, the handy CMM allows you to expand, stuff, and encode into BIN, SEA, or HQX files and more. Perhaps the coolest aspect of CMM is the Stuff And Mail option. This feature works flawlessly with Outlook Express, Claris Emailer, Mailsmith, Eudora, and other popular email clients.

The final piece of the StuffIt Deluxe package is StuffIt SpaceSaver. This control panel invisibly compresses files that match a certain criterion. For example, you can stuff files with yellow labels, files with the word *big* in the name, or files not modified in the last year. Unfortunately, this costs you speed: Opening an invisibly compressed folder within a Save dialog box or the Finder can take nearly six times as long as normal. In the era of big, ultracheap hard drives, the performance hit is a questionable trade-off for this functionality.

In our tests, SIT files were anywhere from 15 to 95 percent smaller than the originals. Because StuffIt Browser is reasonably fast, this software may come in handy for users with lots of infrequently accessed files or owners of relatively small hard drives. Also, when deciding whether to purchase StuffIt Deluxe, remember that the $79.95 asking price includes DropStuff, normally $30 on its own.—*Erik J. Barzeski*

GOOD NEWS: Vast array of compression formats. Seamless compression and decompression within the Finder. Magic Menus galore.
BAD NEWS: StuffIt SpaceSaver is slow. Pricey.

FIND THE FREE StuffIt Expander component of StuffIt Deluxe on The Disc.



THE MAGIC MENU CMM provides useful, time-saving shortcuts.

Compress the Confusion

As you browse the Internet and download files, you're bound to stumble across a few different types of Macintosh compression. The following is a brief list of common extensions and their corresponding formats.

.sea=Self-Extracting Archive Decompress these by simply double-clicking them. They expand without requiring another application. DropStuff can create files of this type.

.hqx=BinHex You can create BinHex files, perhaps the safest format to send, with DropStuff and expand them with StuffIt Expander.

.sit=StuffIt Aladdin's proprietary format is arguably the most common Mac compression format.

.bin=MacBinary Often offered as an alternative to the HQX download format; StuffIt Expander can decode MacBinary files and StuffIt Deluxe can create them.

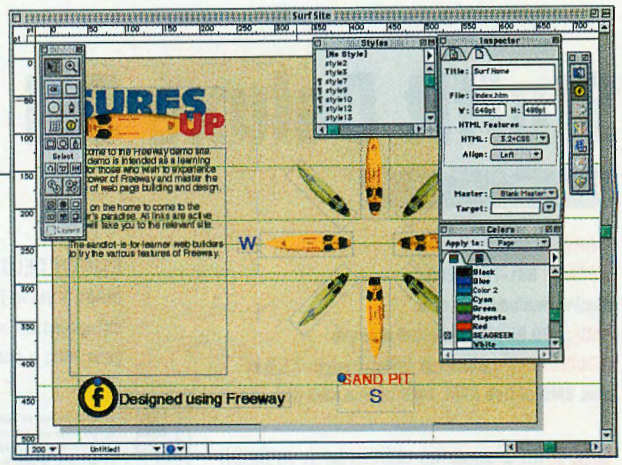
.zip=Zip Common in the PC world; DropStuff can decompress this format and StuffIt Deluxe can create it.

Freeway 2.02

DESIGN & GRAPHICS

COMPANY: SoftPress Systems
CONTACT: 415-331-4820, http://www.softpress.com
PRICE: $299 (SRP)
REQUIREMENTS: 68040 or faster, System 7.5.1 or later, 8MB of free RAM, 20MB of free hard disk space, CD-ROM drive

FIND A TRIAL of Freeway 2.02 on The Disc.



FREEWAY'S QUARKXPRESS-LIKE INTERFACE provides a familiar look and feel for desktop publishing veterans.

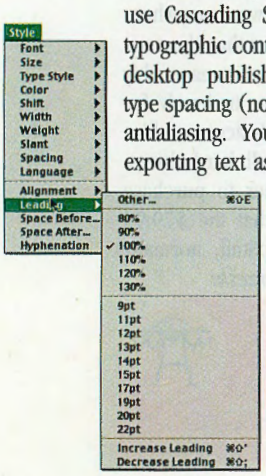
Until recently, if you wanted to purchase a Web design and site management program, you had three basic choices: a code-level HTML editor such as BBEdit; easy-to-use WYSIWYG applications such as Adobe PageMill or Claris HomePage; or high-end apps such as Adobe GoLive and Macromedia Dreamweaver, complex authoring and management environments for professionals.

Enter Freeway: Even in its very first incarnation, SoftPress's application took an unusual approach to Web design, providing a QuarkXpress-like interface that enabled users familiar with traditional desktop publishing to have a good go at Web design without having to learn too many unfamiliar tools. Version 1.0 of Freeway had its flaws, however; for example, it didn't support tables or frames.

But in version 2.02, Freeway has made a great leap toward the Holy Grail of Web design applications: true WYSIWYG control of page layout, with backward compatibility for users still surfing with Internet Explorer 3.x or Netscape Navigator 3.x. This means you don't need to be a veteran Webmaster to give your envisioned design the look you want in different browsers.

Freeway supports HTML 4.0 *and* provides backward compatibility to HTML 3.2. You can use Cascading Style Sheets for the kind of typographic control you would expect from a desktop publishing application—including type spacing (not true kerning), leading, and antialiasing. You also have the option of exporting text as either HTML or antialiased GIFs. The latter gives you even more control over how your text looks.

Freeway works its magic in the background, enabling you to use CSS layers while it creates invisible tables that older browsers can utilize for object placement. This is a problematic approach: When we ran into the occasional glitch, we found it very difficult to fix the split cells and tables within tables that Freeway 2.02 automatically creates.

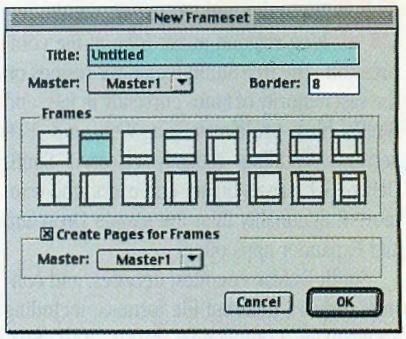


YOU HAVE PRECISE CONTROL over text attributes through nested menus and palettes.

If you've worked with QuarkXPress, Freeway's interface will seem familiar. It provides a pasteboard background, a floating Inspector palette for controlling pages and page elements, a Web-friendly Color palette, and multiple master pages. It enables you to control the positioning of text and graphics precisely on pages, wrap text around graphics, and layer text and graphics (a feature that HTML 4.0 supports and that Freeway brilliantly handles under earlier HTML standards with sophisticated use of tables and cells). We also found the program's customizable internal style sheets very helpful for creating uniform typographical layouts.

THE TOOLS PALETTE PROVIDES ONE-CLICK ACCESS to tools for creating and manipulating elements such as image maps, links, buttons, and pull-down menus.

A FLOATING COLOR PALETTE lets you easily apply Web-compatible colors to text, graphics, and all other page elements.



FREEWAY NOW SUPPORTS FRAMES and provides a variety of standard frame sets you can easily customize.

Freeway 2.02 enables you to import TIFF, PICT, BMP, PNG, QuickDraw GX, and EPS images, and the program automatically exports them as GIF, JPEG, or PNG files when you publish your site. Freeway also comes with 15 actions, simple text files that make it easy to create dynamic elements such as rollovers and timed redirects and that also let you plug Director, Flash, and QuickTime content directly into your pages. These actions are similar to QuarkXTensions, and if you're feeling creative the manual includes a tutorial on writing your own actions. SoftPress has made a small library of additional actions available for free download on its Web site.

Freeway's manual should serve as a model for other developers: It was easy to consult while we kept working with our hands on the keyboard and mouse, and we liked its clear explanations.—*Jeff Merron*

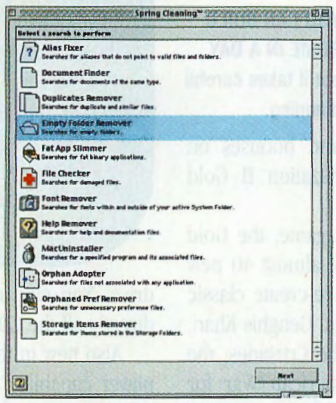
GOOD NEWS: QuarkXPress-like interface. True WYSIWYG output. Simultaneous output of HTML 4.0 and 3.2 code. Excellent manual.
BAD NEWS: HTML completely hidden from user. A bit pricey.

Spring Cleaning 3.0.1

UTILITY

COMPANY: Aladdin Systems
CONTACT: 831-761-6200, http://www.aladdinsys.com
PRICE: $49.95 (SRP), $19.95 upgrade
REQUIREMENTS: 68030 or PowerPC, System 7.1.1 or later, 8MB of free RAM

In today's hectic world, not many Mac users have the time to maintain their Mac's health properly. Simple tasks such as deleting old preference files, fixing aliases, uninstalling old software, and more keep your Mac smiling. Aladdin introduced Spring Cleaning in late 1996 to aid Mac users in this quest; version 3.0.1 has added new features.



SPRING CLEANING 3.0.1 PACKS a lot of features, but many are disappointing and redundant.

Unfortunately, Spring Cleaning 3.0.1 is an almost redundant application. Apple's own utilities best many of its features, while others won't save you any time at all. Combine these disadvantages with a poorly designed interface, and you've got an optional utility at best.

Upon launch, Spring Cleaning prompts you to select one of its 12 possible searches. You can find broken aliases, documents of similar type, fonts, orphaned files, and more. Next it asks you to select the drives you'd like to search. After Spring Cleaning performs its search, a results list appears.

This is where the most serious interface flaws lie. Instead of a row of buttons allowing certain actions—such as attaching aliases, moving items to the Trash, and so on—Spring Cleaning offers only a pull-down menu and an Apply button. That might be acceptable if the program had smarter options: What purpose does the Replace With Alias To option have in the Orphaned Pref Remover? Furthermore, the process of selecting multiple files and performing various actions becomes exceedingly tedious. The interface's only redeeming quality is a limited Restore that can act as a safety net for users.

Among the available tools, Fat App Slimmer and File Checker show the most potential. Although Norton Utilities can check file integrity more thoroughly than Spring Cleaning, the latter's File Checker fixes many damaged files. Fat App Slimmer trims 68K code from FAT applications (applications with both 680X0 and PowerPC code) to save hard disk space. However, Fat App Slimmer also proved to be one of the flakiest features in Spring Cleaning 3.0.1; it crashed more often than it should have, and the hard drive space saved wasn't worth the effort.

Other features allow you to search for broken aliases and orphaned files and preferences. Although Mac OS 8.x prompts you to locate the original file of a broken alias, Alias Fixer can come in handy for batch-repairing broken aliases. Orphan Adopter, for associating files with parent applications, is useful if you have a large group of unassigned files. Orphaned Pref Remover, however, needs work. It did identify orphaned preferences files, but it also found all the Photoshop plug-in preference files, as well as newly created files for applications on a network drive—obviously not orphans. Sorting through the generated search results took nearly twice as long as simply going through the Preferences folder and trashing unneeded files.

Other features include Document Finder, Help Remover, MacUninstaller, Font Remover, Empty Folder Remover, and others. Apple's own Sherlock outdoes most of these, thanks to its search parameters. For example, Document Finder can find all PDF files on your drives, but Sherlock can find all PDFs larger than 100K, modified since January, or with *z* in their name.

Spring Cleaning has outlived its usefulness. Owners of version 2 will want to spend $20 on another product; potential buyers should pass altogether.—*Erik J. Barzeski*

GOOD NEWS: It works—sometimes.
BAD NEWS: Crashes often. Awkward interface slows you down. Has trouble with big hard drives. Duplicates other applications' features without additional benefits.

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Civilization II Multiplayer Gold Edition

FUN & GAMES

COMPANY: MacSoft
CONTACT: 800-229-2714, http://www.wizworks.com/macsoft
PRICE: $50 (SRP), $10 rebate for owners of Civilization II if purchased before July 1, 1999
REQUIREMENTS: PowerPC, System 7.5.3 or later, 10MB of RAM, 13MB of free hard disk space, 4X CD-ROM drive, OpenTransport for multiplayer gaming

YOU CAN BUILD ROME IN A DAY, but it takes careful planning.

The computer gaming arena is crowded with high-visibility strategy games. Some are first rate, others are a waste of time. But one truly stands out in terms of overall quality and addictive fun—Civilization II, which debuted on the Mac in 1997 as an evolution from Sid Meier's 1991 classic, Civilization. Now it's back as Civilization II Multiplayer Gold Edition. It's loads of fun to play, and as addictive as ever.

The basic game is the same: You select one of 21 primitive groups and take over as chieftain at the dawn of civilization. History stretches before you as you grow with your tribe, explore and populate new territory, build cities and armies, and ultimately fashion a global empire to outshine all others.

You can use diplomacy, technology, espionage, economic production, or brute strength to outwit and outstrip competing societies, and the game is different every time. Along the way, you'll research and discover a series of Wonders (if your enemies don't get to them first), each of which bestows massive benefits and bonuses on your general progress. Civilization II Gold Edition is excellent fun.

In addition to the basic game, the Gold Edition throws in a fistful of almost 40 new add-on scenarios. You can re-create classic battles as Alexander the Great, Genghis Khan, or Napoleon. Go back to the Crusades, the American Civil War, the American War for Independence, World Wars I and II, or even stage a jihad. Delve into fantastical scenarios as well—science fiction, sorcery, samurais, prehistoric reptiles, elves and goblins, mythology, they're all here. A note of caution: Don't be startled if you install the game and see no sign of the multiple scenario packs. They're on the CD, but you have to use the custom installation mode if you want the whole 60MB scenario package on your hard drive. You can also load a single scenario directly off the CD.

Also new in the Gold Edition is the multiplayer capability. Matching wits with human opponents instead of your Mac changes the game radically and opens up brilliant new challenges. You can share a game on a single computer with friends, taking turns at the chair, or you can host a game on a LAN or the Internet. You can start a game with the other players in place, or begin without them and let them join later. The Gold Edition's artificial intelligence handles competing tribes until a new player steps in and takes over. Three players keep a game moving briskly; more than four can slow play to a crawl. You can always set time limits for moves, but if the playing crowd gets too big, you'll still spend time waiting for your next shot at the keyboard. Even with a big crowd, strategies and gameplay take such unpredictable turns that the wait can be worthwhile.

The Gold Edition has one immediately noticeable flaw: Its graphics are beginning to age. The overall look and design seem dated in this era of high-resolution graphics. Also, the graphics engine is beginning to creak. The Gold Edition is pricey, particularly if you already own Civilization II. However, if you value multiplayer gaming and the new scenarios, you'll find the upgrade worth the investment.—*John Lee*

GOOD NEWS: All the great classic stuff is here, with imaginative new add-ons. Multiplayer capabilities.
BAD NEWS: High price for new version, especially if you already have Civilization II.

USB Zip Drive

HARDWARE

COMPANY: Iomega
CONTACT: 800-697-8833, http://www.iomega.com
PRICE: $129.95 (street); Zip disk ten-pack $99.95
REQUIREMENTS: USB-equipped Mac, Mac OS 8.1 or later, 8MB of RAM, 30MB of free hard disk space, 2X CD-ROM drive

Photo by Aaron Lauer

THE USB VERSION of the ubiquitous Zip drive sports a cool translucent case.

It's hard to remember what life was like for early iMac adopters, when there were no removable storage options for the newfangled USB. Now we're awash in drives; old friends are available in slick new USB models, and upstart drives seek to carve out a niche by promising floppy disk compatibility or higher performance. Still, nothing beats the good old Iomega Zip drive for sheer ubiquity, with its installed base of millions of minitowers and PowerBooks, Macs and PCs, homes and offices.

In extending the Zip franchise to the world of USB, Iomega has delivered more or less an exact replica of the external SCSI version, distinguished only by its ice-blue transparent case. Our file transfer tests indicate that although it lags a bit when reading or writing very large files, in most cases the USB Zip drive is about as fast as its SCSI cousin. This is as it should be, since the Zip drive's MBps maximum throughput is well within the capacity of the USB interface.

For those who have evolved beyond the need for floppy disk compatibility, the USB Zip drive should provide a perfectly satisfactory removable storage solution. Since it uses the classic 100MB Zip disks, it's a bit behind the curve in terms of capacity, but it's still a solid performer with an enormous installed base. Until a substantially faster, bigger, or cheaper option comes along, you can't go wrong with the Zip drive.—*Mark Simmons*

GOOD NEWS: Performance comparable to SCSI version. Nifty clear blue case. **BAD NEWS:** High-velocity disk eject mechanism. Doesn't support 250MB disks. You can't boot from USB devices.

The Mii Zip

A different kind of USB Zip drive is available for the frequent-flying or space-conscious Mac user. This slim Zip weighs only 10 ounces. Microtech International (800-340-0197, http://www.microtech-pc.com) announced the pocket-size USB Zip last January. It uses standard 100MB Zip media, costs $199, and is oh so portable.

MII ZIP—A PETITE TREAT in a lavender and clear plastic casing.

MAC ---------- WINDOWS

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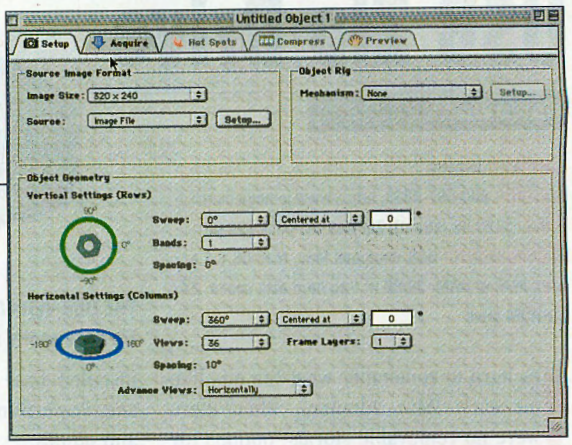
COMPANY: VR Toolbox
CONTACT: 877-878-6657, http://www.vrtoolbox.com
PRICE: $149.99 for ObjectWorx and PanoWorx, $89.99 for SceneWorx (SRP)
REQUIREMENTS: 68040 or PowerPC, System 7.5 or later, 8MB of RAM, CD-ROM drive, Appearance Manager extension, QuickTime 2.5 or later, QuickTime VR 2.0 or later



IN VR OBJECTWORX, THE SETUP SCREEN gives you instant access to all your movie's settings, including the number of rows and columns and the source for your images.

FIND DEMOS of VR PanoWorx, ObjectWorx, and SceneWorx on The Disc.

VR PanoWorx, VR ObjectWorx, and VR SceneWorx 1.01 are the latest cross-platform QuickTime VR authoring tools from VR Toolbox. The company's slogan, "industrial-strength tools for QuickTime VR," pretty accurately describes the functionality of these three applications.

VR PanoWorx is a QuickTime VR panorama builder. Panoramas generally provide a 360-degree horizontal view of a location from a single vantage point. A VR panorama can offer 10 to 50 degrees of additional vertical viewing. Basically, a VR panorama allows you to look around a place as if you were there.

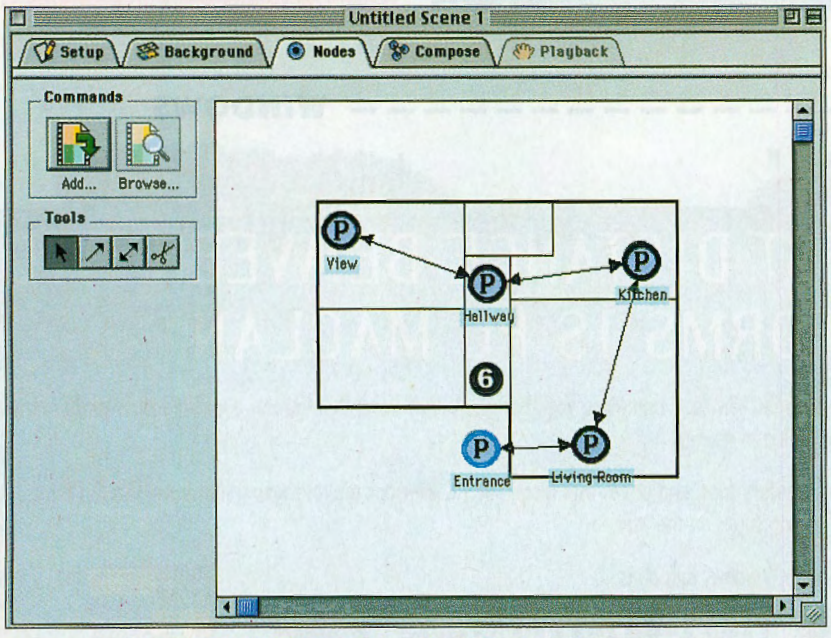
You construct panoramas from either one large wide-format photograph or a series of overlapping photographs. In either case, VR PanoWorx can acquire the images and create a VR panorama. The program's simple, tabbed interface makes the process as easy as possible, although users who are unfamiliar with either 3D work or photography will encounter a medium-to-steep learning curve.

In the first screen, the Setup window, you specify what types of images you're going to use. Once you set the image information, you can determine the panorama's *sweep* (the number of degrees in it) and the maximum number of frames. Before constructing the panorama, you set the focal length for the camera lens used to capture the images, the field of view, and the final image's pixel dimensions. You do the construction in the Acquire, Stitch, Blend, and Compress windows, which allow you to adjust the way the images align, blend together, and compress for the final movie.

VR ObjectWorx is the conceptual opposite of PanoWorx. Instead of creating QuickTime VR movies that look out at the world in 360 degrees, a VR ObjectWorx movie rotates 360 degrees around an object. You create a VR Object from a series of stills taken of the object as it turns on a central axis. Typically, you turn the item 10 degrees each time for a total of 36 pictures. For a complete view, you can also photograph a VR Object vertically.

Like PanoWorx, ObjectWorx makes creating a VR Object easy, although learning the nomenclature of VR Object geometry is much more difficult. Unfortunately, the tough learning curve begins immediately in the Setup screen, with a number of hard-to-understand options for settings. Although a VR Object has three dimensions, you must build it in what is essentially a grid system of columns and rows. Once you understand how the columns and rows work, the rest is quite easy. The other windows—Acquire, Compress, and Preview—are identical to those in PanoWorx. An additional window, Hotspots, lets you set HTML-style URLs for the final object movie.

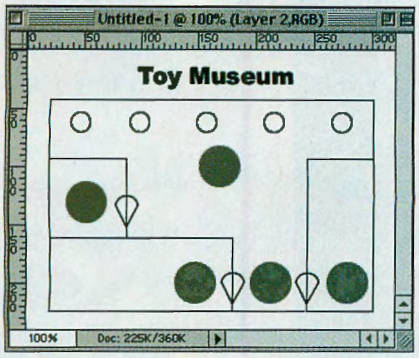
Both these applications possess a number of solid features. They can create streaming QuickTime movies for Web playback, embed URL hot spots, and import from virtually any major file format. PanoWorx also provides control over the initial pan, tilt, and zoom of a movie, as well as its maximum and minimum ranges. ObjectWorx includes control



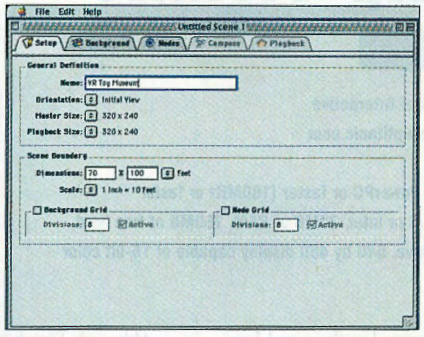
COMPILE VR OBJECTS AND PANORAMAS into multinode QuickTime VR movies with ease using VR SceneWorx's intuitive drag-and-drop interface.

Are You Making a Scene?

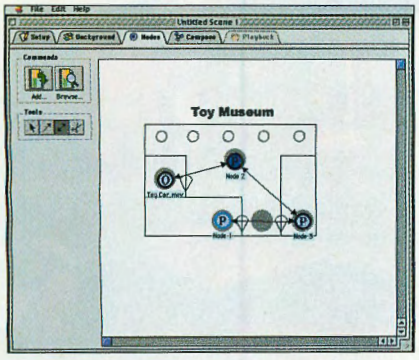
One of the most powerful uses of QuickTime VR is the creation of complete VR environments, or Scenes. Using the VR Toolbox applications, you can make a fully immersing environment, much like those found in games such as Myst and The Journeyman Project.



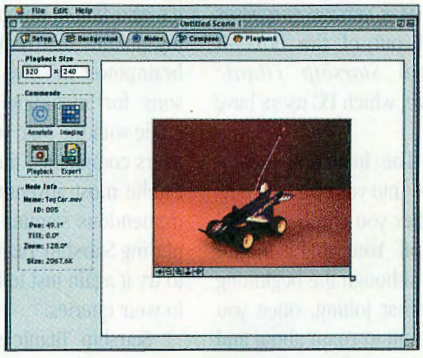
1 After you have created your VR Panoramas and VR Objects in PanoWorx and ObjectWorx, you can start the scene. The first step is to create a map like this one in an image editor so you can lay out your movies and guide users through the Scene.



2 Set up your movie. You'll need to let SceneWorx know how large the output movie will be, the movie's pixel dimensions, the starting angle of your panoramas, and the map scale. Once you've determined these settings, move on to making the Scene.



3 Import the movies and place them on your map. A letter *O* indicates object movies, and a *P* indicates panoramas. The lines represent paths between movies, and the arrows tell you in which direction the user can travel.

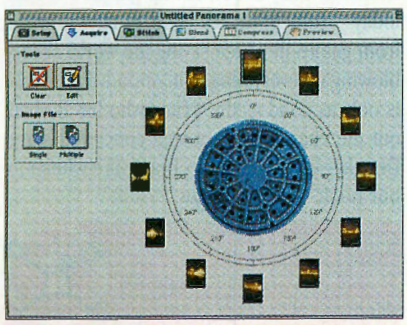


4 Once you've compressed the Scene, you can move to the Playback window and preview it. You can also set various quality sliders from the Imaging button. If you're happy with the way scenes link together, export your result as a VR Scene.

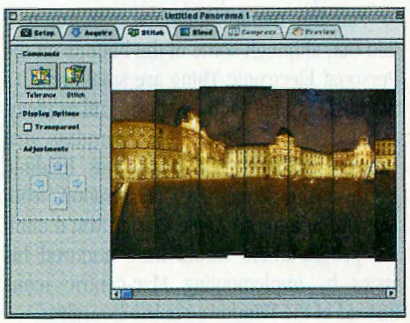
over *VR Object Camera* rigs and supports frame-based animation from a single view of an object, as well as synchronized sounds, captions, and bluescreens.

The SceneWorx application ties ObjectWorx and PanoWorx together to create multinode VR movies, such as a virtual tour of a museum in which each node is a different room or an object you can examine. SceneWorx's drag-and-drop interface is simple to use; placing panoramas and objects is an intuitive process, and you can easily create hot-spot links. SceneWorx supports QuickTime VR 1.0 and 2.0 formats, and can import linear QuickTime movies and still images for background scene maps or scene elements.

All of these tools are excellent and perform their specific functions perfectly. They are cross-platform, and VR Toolbox is currently beta-testing a bundled package containing all three tools. With the aid of the included tutorials, even the most neophyte user can quickly start creating VR Objects, Panoramas, and Scenes. If you're looking for a fine set of VR creation tools, these three definitely fit the bill.—*Rick Sanchez*



VR PANOWORX'S ACQUIRE WINDOW lets you set up all the images and their perspective angles in a panorama, as well as providing a link to a pixel editor for touch-up work.



THE PANOWORX STITCH WINDOW pulls together your images to create a panorama. You can also adjust the images here to make sure they align properly.

VR ObjectWorx 1.01

GOOD NEWS: Easy to use. Excellent interface. In-frame animation. VR rig support. BAD NEWS: VR Object geometry nomenclature is difficult to understand.

VR PanoWorx 1.01

GOOD NEWS: Expansive feature set. Easy to use. Good tutorial. Can set URL links. BAD NEWS: Taking pictures for panoramas is difficult.

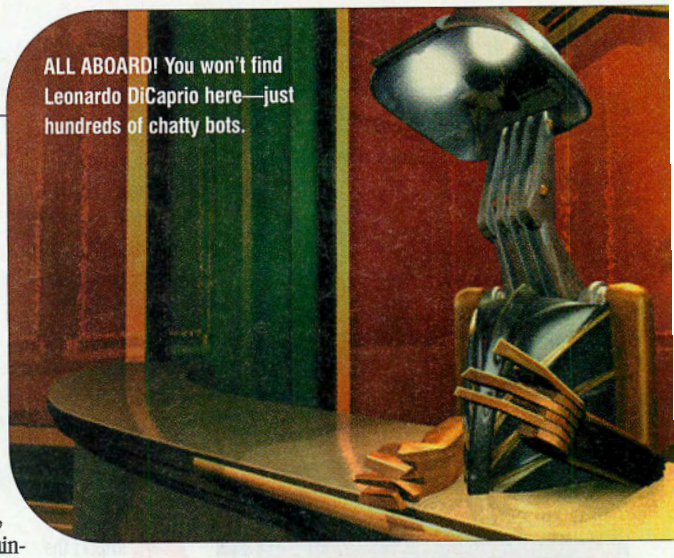
VR SceneWorx 1.01

GOOD NEWS: Easy to use. Inexpensive. Well integrated with other VR Worx tools. BAD NEWS: Not as robust as the other tools.

Starship Titanic

FUN & GAMES

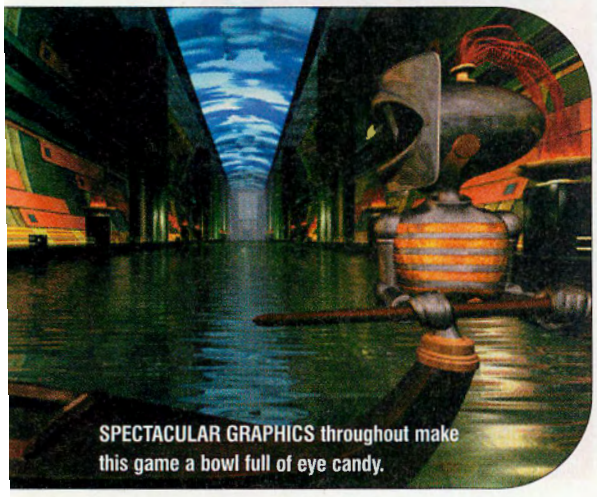
COMPANY: Simon & Schuster Interactive
CONTACT: http://www.starshiptitanic.com
PRICE: $49.95 (SRP)
REQUIREMENTS: 120MHz PowerPC or faster (180MHz or faster recommended), Mac OS 7.5 or later, 32MB of RAM, 160MB of free hard disk space, 4X CD-ROM drive, 640 by 480 display capable of 16-bit color (thousands of colors)



ALL ABOARD! You won't find Leonardo DiCaprio here—just hundreds of chatty bots.

Conceived by celebrated author and long-time Mac user Douglas Adams, Starship Titanic has finally emerged on the Macintosh platform almost a year after the PC version. However, the Mac version surpasses the PC version right out of the box—it includes the essential *Starship Titanic Official Strategy Guide*, which PC users have to buy separately.

Here's the story: The luxury spaceship Starship Titanic crashes into your house on its maiden voyage, and after you climb onboard to investigate, it takes off. Your goal is to find your way back home. Although the beginning of the game is somewhat jolting, once you board the ship you'll want to roam about and talk to every inhabitant. In fact, talking to characters is one of the most enjoyable things to do in Starship Titanic. This game features one of the most dynamic language processors ever, which allows you to have real conversations with the game's central characters. There are more than 16 hours of recorded dialogue and a library of more than 10,000 popular references. Try asking the Doorbot about the Spice Girls, or ask about Douglas Adams himself. Hilarious!



SPECTACULAR GRAPHICS throughout make this game a bowl full of eye candy.

Although Starship Titanic is a typical click-to-move graphical adventure game, it's also full of entertaining puzzles that require some pretty strong brainpower to solve. In fact, one of the reasons for including the 176-page strategy guide with the Mac version was that many PC users complained the game was too difficult. Unlike most adventure games, this one has tremendous stamina. By the time you finish playing Starship Titanic, you'll probably want to try it again just to hear different responses to your queries.

Starship Titanic shines in several areas. First, its photo-realistic graphics are superb. The animations of the robots are rarely in sync with the voice-overs, but this detail doesn't detract much from the game. Second, the overall gameplay in Starship Titanic is vastly superior to that of adventure titles such as Riven and Myst—it gives you the ability to carry on real conversations with characters by simply typing your question. You never feel rushed (except when you mistakenly arm a bomb!). Lastly, you obtain room upgrades as the game progresses—having access to more of the ship will sharpen your interest.

Starship Titanic's interface is mostly well laid out, although some of the buttons on the Personal Electronic Thing are small, and it's not obvious what each one does. Call us picky, but we really disliked the hourglass that showed up when the game was loading. Because the game drew inspiration from Douglas Adams, an Apple Master, you'd think the programmers would have honored his tastes by implementing Mac-centric icons instead of the Windows-centric hourglass.

In recent years, adventure games have languished in the context of fast-paced action games such as first-person and third-person shooters and real-time strategy titles. However, there is still room for a non-violent, family-friendly adventure game like Starship Titanic. Its three CD-ROMs guarantee a longevity you don't usually find in games of this genre, and realistic responses to a player's input add a satisfying personal touch to gameplay.

FIRST-CLASS ACCOMMODATIONS are what you're after, but it will take you a while to get that upgrade!

Starship Titanic serves as a great escape from the many shoot-'em-up games available today—sometimes it's good to take a break from games in which saving the world means blowing up everything in it. Any adventure title is only as good as the writer who has fleshed out the characters in a well-conceived story. Douglas Adams' Starship Titanic is a winner in our book.—*Mike Dixon*

GOOD NEWS: Tons of recorded dialogue, with a sophisticated artificial intelligence, make for longevity. Includes free strategy guide. The humor of Douglas Adams pervades the game. Gorgeous graphics. **BAD NEWS:** Difficult puzzles. Interface takes getting used to.

Web Buddy 2.0

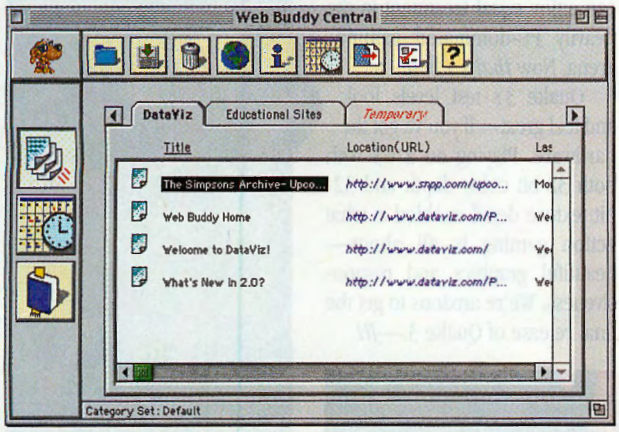
UTILITY

COMPANY: DataViz
CONTACT: 800-733-0030, http://www.dataviz.com
PRICE: $39.95 (SRP)
REQUIREMENTS: Macintosh IIci or later, System 7.1 or higher (7.1.2 for Power Macs), 4MB of RAM, Internet connection

DataViz claims that Web Buddy 2.0 accelerates your Web browsing and takes the Web "on the road." But Web Buddy isn't a browser accelerator; rather, it's an archiving utility that helps you organize downloaded pages. Web pages still have to be downloaded from the Internet, not from a proxy server. However, a saved Web page loads into your browser much faster than normal when you select the page file from Web Buddy Central.

FIND A TRIAL of Web Buddy 2.0 on The Disc.

Taking Web pages with you is where Web Buddy works as advertised. You can archive saved pages in Web Buddy Central—retrieving a page from there is much faster than getting its text and images from a browser cache. You can take a snapshot of a Web page and leave it on a hard drive or shared network. The free



WEB BUDDY CENTRAL IS WHERE YOU STORE, categorize, and fetch local copies of Web pages.

Internet Explorer browser, however, already lets you save Web pages via its archive save feature.

Using Web Buddy 2.0 is straightforward but not perfect. The manual is sketchy; the toolbar vanished once while we were browsing, forcing us to rerun it manually from the Finder; the translation utility produces uncertain results, especially with tables or graphics; and Balloon Help would have been nice. All things considered, Web Buddy is too pricey and duplicates features you'll find in a free browser. *—Mark Shuchat-Marx*

GOOD NEWS: Easily pulls Web pages from the Internet for local storage and offline viewing. A snap to learn. Low memory requirements. **BAD NEWS:** Slow, even on a Power Mac. Unpredictable translation into non-HTML formats. No Balloon Help.

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power play

Surgeon General's warning: Quake 3 is addicted and causes insomnia.

Quake 3 Test

Id Software releases the Quake 3: Arena test first for the Mac

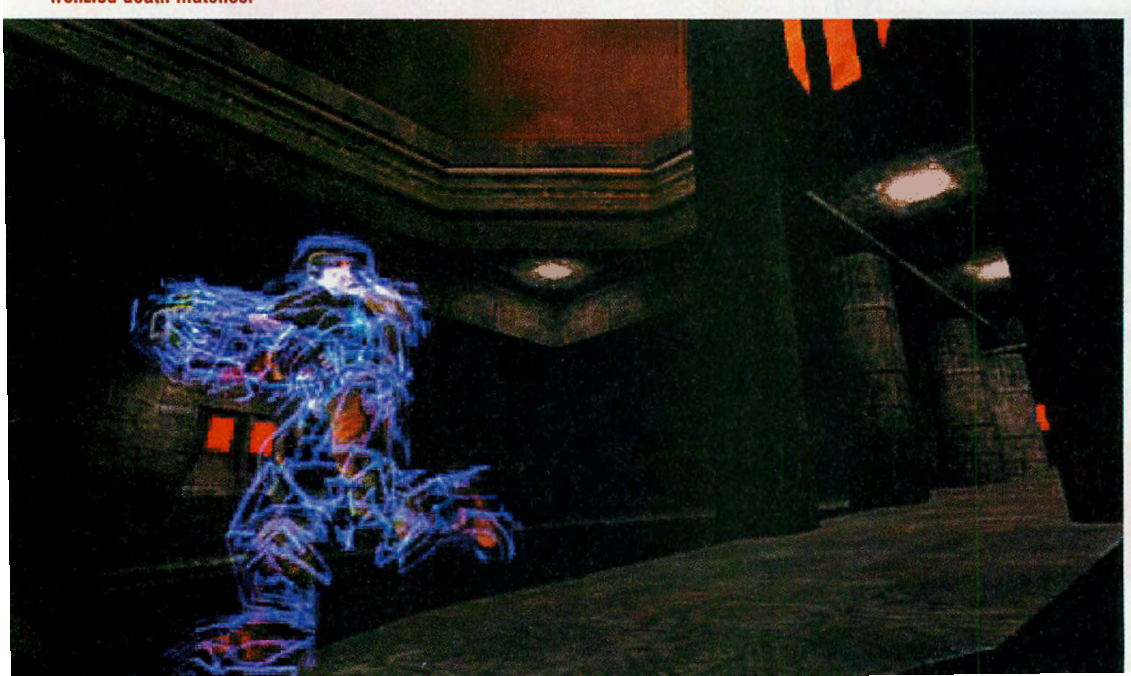
Id Software, the most worshipped and hyped game development team on the planet, released its long-awaited Quake 3 test on April 24—it's essentially a technology demonstration—for the Mac platform *before* the Linux and Windows versions. That's right—those Mac action gamers who have been waiting and waiting for the test—which id's lead programmer John Carmack first announced at Macworld Expo last January—got the first crack at the upcoming Quake 3: Arena in its preliminary form. This is the first OpenGL-native game to appear on the Mac.

Amid the hoopla, Mac diehards touted the Mac-first release of the Quake 3 test as a sign of the Mac platform's superiority. Conversely, many PC gamers reacted negatively to the release, directing flames at id Software. In light of both the positive and the negative reactions, programmers John Carmack and Graeme Devine updated their PLAN files (a PLAN file is a game programmer's log) to explain the Mac-first release. According to Devine, the Mac release was ideal because of the platform's uniform hardware configuration: G3, Rage Pro, or Rage 128 with one OpenGL driver and 4MB of VRAM or higher, the best control group for finding the engine and networking bugs. Also, Carmack dispelled conspiracy theories suggesting that Apple had influenced the release.

Having the Quake 3 test on the Mac first is definitely a very cool thing for Mac gamers. It means that OpenGL isn't an empty promise and that game developers can deliver fast, high-quality, OpenGL-based real-time 3D on Apple's G3 desktops and towers. The larger goal is to iron out bugs and improve later releases for all platforms, so Mac action gamers can enjoy equal treatment in the heavily PC-dominated gaming arena. Now *that's* a first.

Quake 3's test levels look and feel great—if you've got the hardware. Playing on a G3 with both 32-bit color depth and 32-bit texture detail enabled is what action gaming is all about—beautiful graphics and responsiveness. We're anxious to get the final release of Quake 3.—*JH*

QUAD DAMAGE MEANS quadruple the power to crush the enemy in frenzied death matches.



GAMES & GEAR

Mac RS Pedals

Put the pedal to the metal, road warriors! Act Labs has announced the Mac Racing System, a USB product for iMacs and blue-and-white G3s. OK, it's based on PC gear, but Act Labs guarantees that the Mac Racing System will sport a futuristic look to accompany Apple's translucent plastics. But will it be bulletproof?

The Mac Racing System

supports force feedback, which means the wheel can rumble and spin wildly as you lose control of your hell-fire speed demon. Be forewarned, though: Mac versions of racing games don't offer force feedback yet. But if Carmageddon 2 gets updated to include that feature, the Mac Racing System would support it. Even without force feedback, this product definitely has a cool look and feel. The Mac Racing System will be available this fall for $99.99.

NEWS

Apple Executive Makes Bungie Jump

Peter Tamte joins Bungie Software to expand its publishing horizons

On April 22, Bungie Software announced that Peter Tamte, senior director of consumer marketing at Apple Computer, had joined its Chicago team as executive vice president of publishing. Before his gig at Apple, Tamte made his name as the game-loving executive director of MacSoft, which he founded in 1993 and made into the leading publisher of Macintosh entertainment software, including Quake, Unreal, and Falcon 4.0. GT Interactive acquired MacSoft in 1996.

The addition of Tamte is a great coup for Bungie, which maintains an extremely loyal base of Mac fans because of its Marathon and Myth titles but hasn't yet thoroughly penetrated the PC games market. Tamte's experience in publishing at MacSoft/GT Interactive and in marketing at Apple will further Bungie's expansion into the PC space.

But what are Bungie's plans for the Mac? The company's self-proclaimed plans of "world domination" have strengthened, and they include the Mac. The software developer has no plans to abandon the Mac platform as it reaches out to other players. Tamte seems committed to either porting PC-first titles or influencing developers to codevelop a Mac version. In the future, when Bungie acquires a title from a third-party developer, there is a much greater likelihood that Bungie will develop a Mac version than if the title goes to a traditional PC-only publisher. In general, Mac gamers should enjoy an increase in the quality of Mac titles in years to come. —*JH*

BUNGIE DEVELOPS original titles for the Mac and PC, including the upcoming third-person action-adventure title Oni, which features an anime style.

MACSOFT BROUGHT THE QUAKE II KILLER UNREAL to the Mac through its parent company, GT Interactive.

TOP 10 MOST WANTED GAMES and Game Hardware

ITEM	WHAT IT IS	WHY WE WANT IT
Voodoo3	2D and 3D graphics accelerator	New 3dfx Voodoo chip does Glide best
TNT2	2D and 3D graphics accelerator	Next Nvidia chip set will outrun Voodoo3
RollerCoaster Tycoon	Simulation	Roller coasters we can only dream of
Drakan	Third-person action-adventure	Has a fire-breathing dragon, the Xena-like Rynn
Alpha Centauri	Strategy	It's Civ II in space with badass aliens
Tribes	First-person action	Customizable skins, mad co-op squad warfare
Baldur's Gate	Role-playing	Follows rules of Advanced Dungeons & Dragons
DVD-ROM kit	DVD drive for your Mac	Big games will ship on DVD; better video
Ultima Online	Online role-playing	A gaming community with persistent characters
3D sound card	3D positional audio	3D sound effects in games like Unreal

Q&A

Q I've heard that the Quake 3 test runs only on ATI's Rage Pro and Rage 128 chips. I have a Voodoo card in my Mac. Can I play Quake 3, too? Please help a desperate Quaker.

A I am very happy to say—you betcha! The reason the OpenGL-native Quake 3 runs on Rage Pro and Rage 128 is that ATI developed a Mac OpenGL driver for its chip sets. 3dfx, maker of the Voodoo line of graphics accelerators, doesn't have a Mac OpenGL driver yet. However, if you download the free MesaQuake, which is an OpenGL-like library, you can install the drivers and use your 3dfx Voodoo Graphics, Voodoo2, or Voodoo Banshee card to play the Quake 3 test. How you do think I've been doing it with my Voodoo2? You can find MesaQuake on all three major Mac gaming Web sites, Inside Mac Games (http://www.imgmagazine.com), MacGamer's Ledge (http://www.macledge.com), and MacGaming (http://www.macgaming.com). One caveat—id Software doesn't support MesaQuake, so any bugs you encounter are yours to keep. Keep your MesaQuake up to snuff, as it gets frequent updates.

how to

Are you a movie-making, vinyl-burning genius? You will be soon.

Make Movies with MovieWorks

by Rick Sanchez

EASY

With scanner, digital camera, and video camera prices plummeting like Microsoft's credibility, more and more home computer users are looking to use their Macs to create multimedia family albums, personal histories, stories, and more. Most interactive movie authoring applications such as Macromedia Director cost hundreds of dollars and are very complex, but MovieWorks from Interactive Solutions is a suite of tools that includes animation, video recording and editing, sound recording and editing, painting, and interactive programming in an elegant, easy-to-use package that goes for less than $100.

With MovieWorks, pretty much anyone who can use a Mac can create interactive movies. MovieWorks' ease of use is its most powerful asset, allowing teachers, parents, and children to create interactive experiences without encountering a steep learning curve.

In a few steps, we'll show you just how easy it is to create a movie with three scenes: an introductory screen, a QuickTime movie screen, and an exit screen. Then we'll create a player file to distribute to other Mac users. The movie also has Next, Rewind, and Quit buttons. We've collected all the media elements—a movie, PhotoShop versions of the buttons, and a backdrop image. Here's how they come together.

TOUGH
This stuff's for the pros.

TRICKY
It'll take some effort, but you can do it.

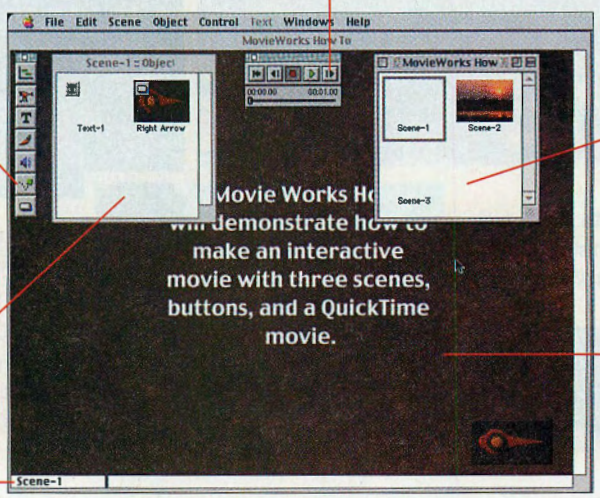
EASY
The fundamentals, if you will.

Face to Interface

1 **MAIN TOOLS: This palette provides instant access to MovieWorks Video, Sound, Animation, Paint, and Text tools.**

2 **OBJECTS: This window provides access to all the elements that compose a scene. The backdrop image doesn't appear among this scene's objects because we've placed it in the Background layer.**

3 **SCENE NAVIGATOR: This pop-up menu gives the user access to the Background layer and to any scenes the movie contains.**



4 **CONTROLS: This panel controls playback in an individual scene that has time-based elements such as QuickTime movies, sounds, or animation.**

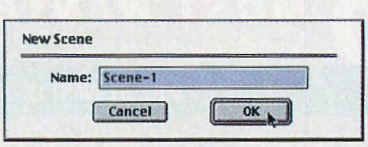
5 **SCENES: This window allows the user to jump from scene to scene in MovieWorks by double-clicking the scene thumbnails. These display only those elements unique to a scene, so the universal Background image won't appear.**

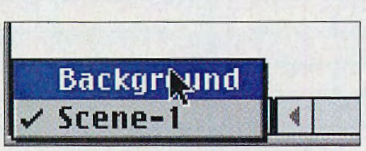
6 **PROJECT: All of the authoring in MovieWorks takes place in this window. Users can move graphics, import objects, or add type from this screen.**

FIND THE MovieWorks 4.1.2 demo on The Disc.

1 Setting the Background

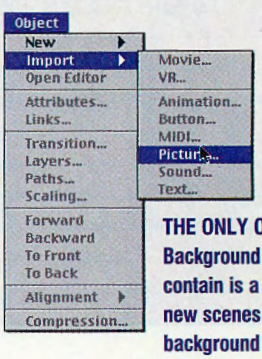
The first step in creating with MovieWorks is to set up a background for our project. We launch MovieWorks and select New Project from the opening screen, then name the first scene in the New Scene dialog box that appears. This first scene contains our introduction to the movie. Before proceeding, we need to set a background image. We switch to the Background layer using the Scene Navigator pop-up menu in the lower left corner. From the Object menu, we select Import, then Picture to set the image appearing as a backdrop in all of the movie's scenes. Without a Background setting, MovieWorks creates each new scene in a blank screen.





SCENES START OUT AS BLANK SLATES. To carry over a consistent background image from scene to scene, switch to the Background layer, then import the background graphic.

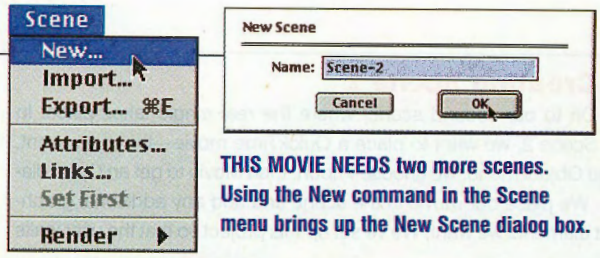
MOVIEWORKS MOVIES BREAK DOWN into scenes that contain all the text, video, sound, and graphic media for a sequence.



THE ONLY OBJECT the Background layer can contain is a picture, which all new scenes will use as the background image.

2 Creating New Scenes

It takes more than a background to make an interactive experience—we need scenes to hold items such as video and controls. Our sample movie requires two additional scenes: one to hold a QuickTime movie and one to give the end user the option of restarting the movie or quitting. Creating additional screens is simple. From the Scene Navigator, after the movie has played, we switch back to Scene 1. From the Scene menu, we select New, then name the new scene in the resulting dialog box. We repeat this process for the third and final scene. We can create any number of additional scenes this way, accommodating new content such as sounds and animation.



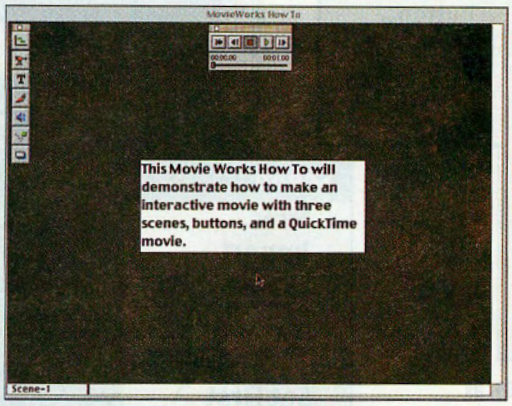
THIS MOVIE NEEDS two more scenes. Using the New command in the Scene menu brings up the New Scene dialog box.

TO CONTINUE CREATING the first scene, we need to move back into Scene 1 using the Scene Navigator.

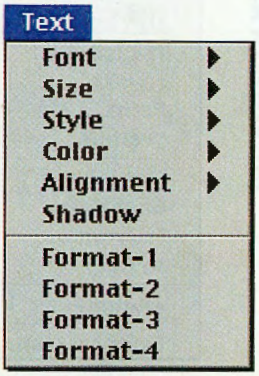
3 Creating Text

We'll use MovieWorks' text tools to create some text in the introductory scene so that viewers know what they're going to see. We can create text in two ways: select New, then Text from the Object menu; or click the Text icon in the Main Tools window. Either method creates an editable text box. The Text menu contains all the usual formatting controls, such as Style, Alignment, and Size.

CREATING TEXT IS EASY—simply click the Text icon in the Main Tools window (shown here) or select New, Text from the Object menu to create a text box.



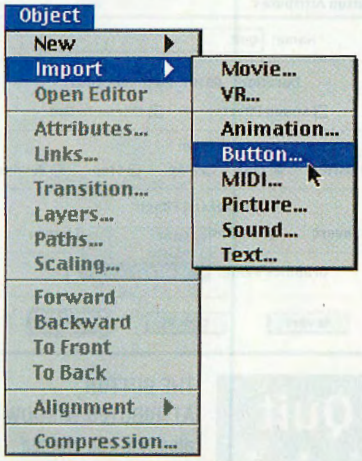
IT'S NOT EXACTLY THE MAGNA CARTA, but this bit of prose does show how to use MovieWorks' text tool to create opening credits of sorts.



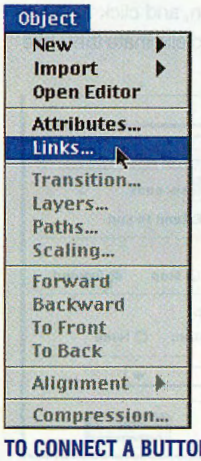
MOVIEWORKS FEATURES a list of text management tools, including Font, Size, and Shadow.

4 Make a Button

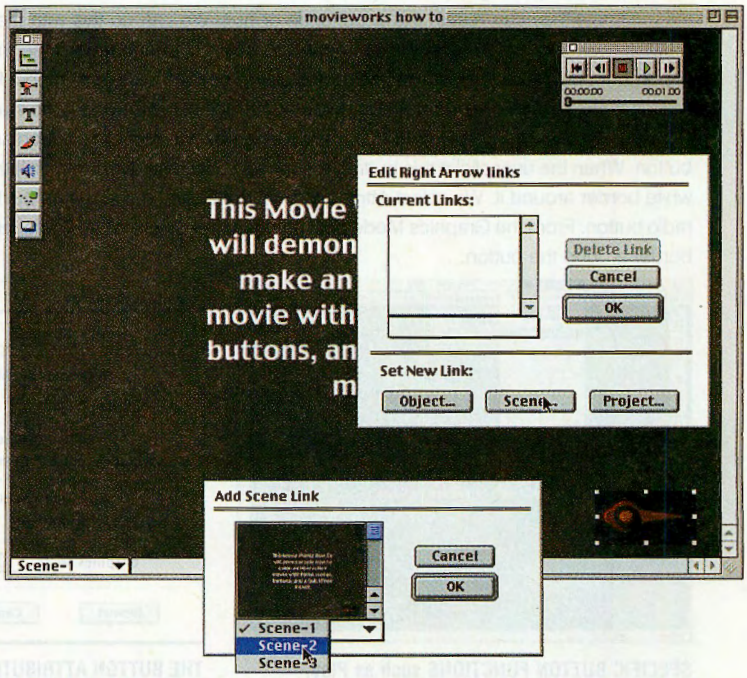
MovieWorks does a lot more than just play movies. To demonstrate, we'll add a button to get the end user to the next scene, which contains the QuickTime movie. From the Object menu, select Import, then Button. This brings up an Open dialog box, in which we navigate to the button graphic. Once the button is in the scene, we place it and—making sure we still have it selected—choose Links from the Object menu. We click the Scene button under Set New Link. In the subsequent dialog box, we select Scene 2 from the Scene Navigator pop-up menu and click OK. We click OK again in the Links window to close the dialog box. Now, when the movie runs, clicking the button takes the viewer to the second scene.



BUTTON GRAPHICS IN MOVIEWORKS are different from regular graphics. To use graphics as buttons, import them as buttons using Import in the Object menu.



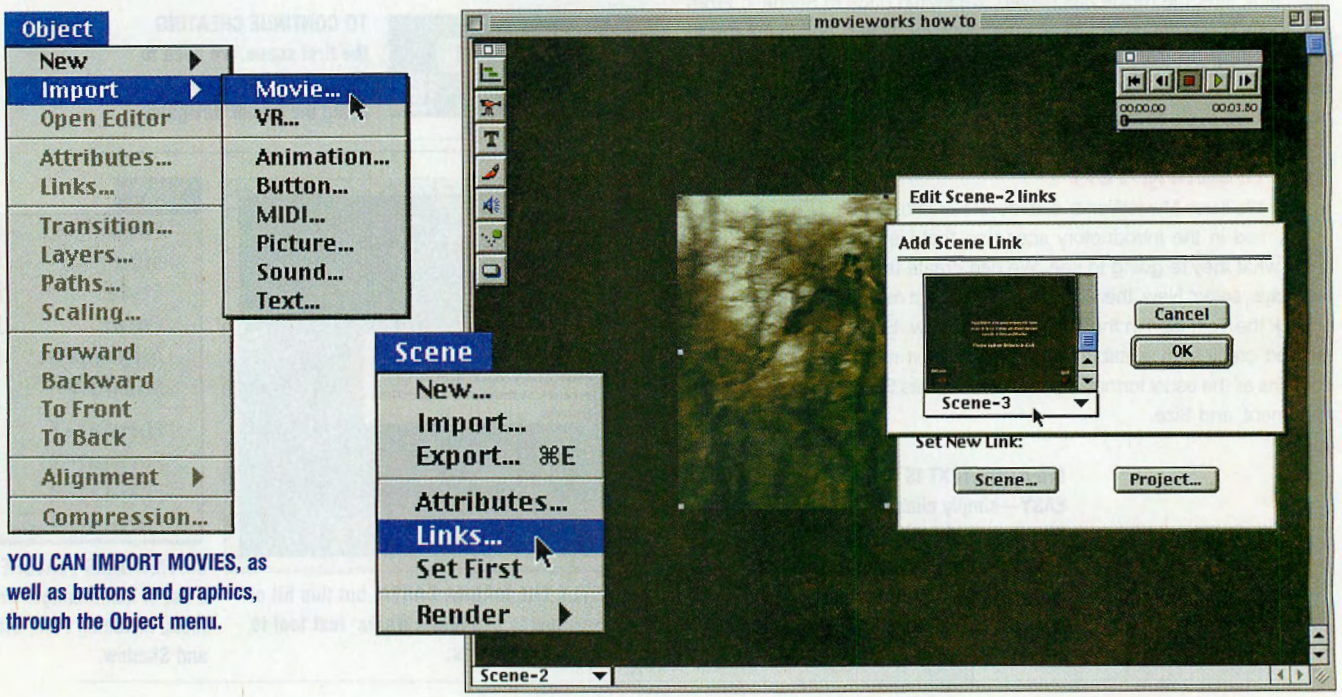
TO CONNECT A BUTTON to a scene, set it with the Links command, which opens the Edit Links dialog box.



THE EDIT LINKS DIALOG BOX allows the user to link the button to another object, a scene, or an external project. The Add Scene Link dialog box offers a drop-down menu listing all the scenes available for linking.

5 Creating Scene 2

On to our second scene, where the real magic takes place: In Scene 2, we want to place a QuickTime movie—the main event. From the Object menu, we choose Import, then Movie to get an Open dialog box. We place our movie in the scene and add any additional graphic or text elements we want. We've set up this project so that the user waits for the QuickTime movie to end before going to the next screen. This means the user doesn't have to click a button to move to scene three. Instead, the scene itself contains a link to scene three that triggers when the QuickTime movie finishes playing. From the Scene menu, we select Links. The Add Scene Link dialog box is similar to the Object Links dialog box. We select Scene 3 from the drop-down list.

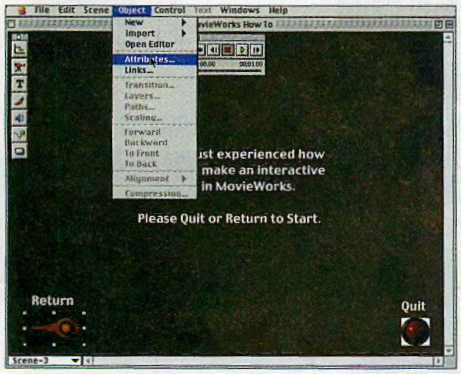


YOU CAN IMPORT MOVIES, as well as buttons and graphics, through the Object menu.

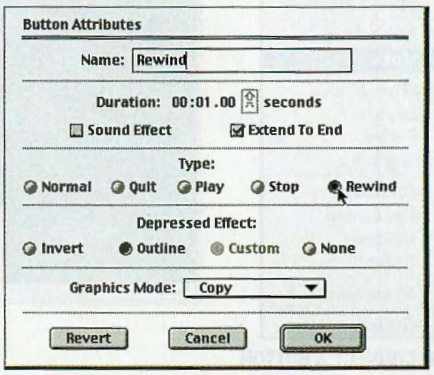
USERS DON'T REQUIRE A BUTTON to navigate from scene to scene. Scenes themselves can contain links to other scenes, triggered when some animation—or in this case a QuickTime movie—finishes playing.

6 Creating Scene 3

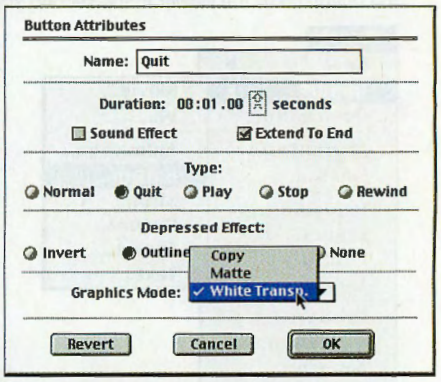
Let's wrap things up. For our final scene, the movie should have some exit text, letting users know they can restart the experience or quit. We can do this with the Text tool and some formatting commands. This scene also needs two buttons, one to rewind the movie and one to quit. We import both buttons from the Import Buttons dialog box in the Objects menu. Rewind and Quit are special functions set from the Attributes dialog box. We select the Rewind button, and from the Object menu we select Attributes. In the Button Attributes dialog box, we name the button and click the Rewind radio button. When the user clicks this button, the movie starts over. Next, we click the Quit button. Notice the white border around it. We select Attributes from the Object menu, name the button, and click the Quit radio button. From the Graphics Mode pop-up menu, we select White Transparent to eliminate the white border around the button.

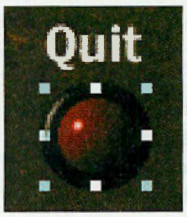


SPECIFIC BUTTON FUNCTIONS such as Play, Rewind, and Quit have special functions set by clicking a button graphic and selecting Attributes from the Object menu.



THE BUTTON ATTRIBUTES WINDOW allows you to designate what special function a button performs, how it behaves when clicked, and what its name is.

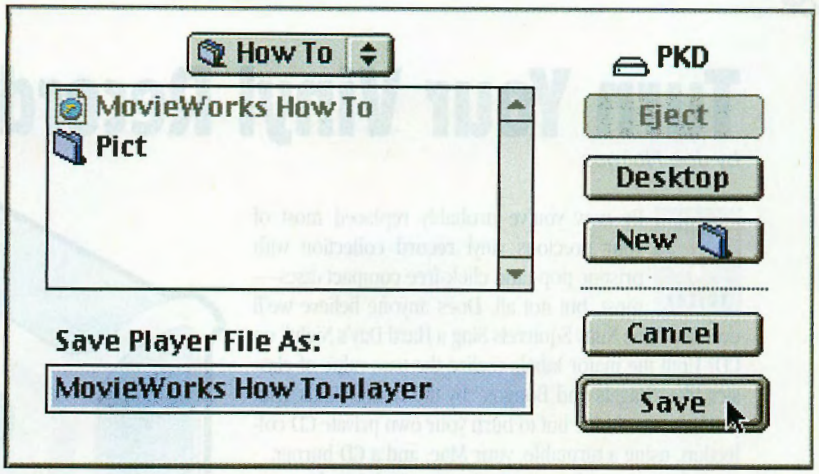




THE BUTTON ATTRIBUTES WINDOW also lets you change an image's graphic mode, making white borders transparent.

7 Create a Player File

The movie is ready for prime time, but we have to save it out as a player file first. After all, it's not just a simple QuickTime movie—it's an interactive adventure! First, we return to Scene 1 using the Scene Navigator menu in the bottom left. From the File menu, we select Make Player. In the dialog box, we name the movie and save it.



SAVING A PROJECT FOR PLAYBACK IS EASY. Just select Make Player from the File menu and name the project. Simply selecting Save from the File menu would save the whole project as an editable MovieWorks file and not as a playable movie.

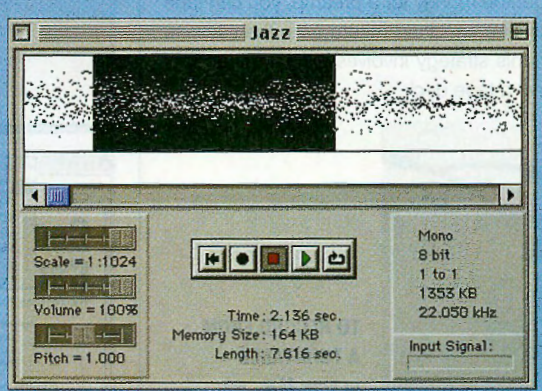
8 Playback

To play the movie, we quit MovieWorks, open the MovieWorks folder, and double-click the Player application. Once the Player launches, we select Open from the File menu and navigate to the player file, saved in Step 7. We play the movie to make sure it works correctly. To share an interactive movie with other users, we would just put the Player application and the file on a floppy or Zip disk and send the project out.

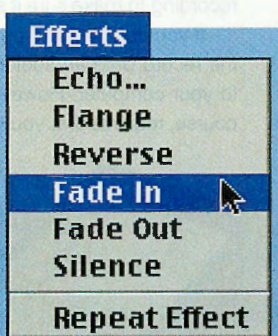
TO PLAY BACK A MOVIEWORKS PROJECT, launch the Player application and open the project's saved player file.

Sound Editing in MovieWorks

MovieWorks is a valuable authoring suite because in one neat package it supplies users with all the tools they need to create an interactive movie. MovieWorks Sound, the audio module, is a full-fledged 16-bit stereo sound application, providing both sound-recording and -editing features. With Sound, the user can capture music or speech from the Mac's built-in microphone jack and edit it to suit a given project. MovieWorks Sound can also open existing digital audio files. Although it isn't as full featured as a dedicated application like Bias Peak LE, it does have enough features to take care of most audio needs, including effects such as fades, reverse, and echo.



MOVIEWORKS SOUND IS a 16-bit sound editing and recording application included in the MovieWorks package.



AFTER EDITING AUDIO, you can process it in several ways—adding an echo, reversing speech or music for hidden messages, and fading in or out.

Turn Your Vinyl Records into Audio CDs

by Joe Holmes

TRICKY

By now you've probably replaced most of your precious vinyl record collection with pristine pop- and click-free compact discs—most, but not all. Does anyone believe we'll ever see "The Nutty Squirrels Sing a Hard Day's Night" on CD? Until the major labels realize the true value of classics like "Bagels and Bongos" by the Irving Fields Trio, you have no choice but to burn your own private CD collection, using a turntable, your Mac, and a CD burner.

Taking sound from an analog source is not the same as replicating tracks from CD to CD. You must first digitize the audio onto a Mac volume, such as a hard disk, before you can burn your CD, and turntables don't sound good when played directly through a Mac.

You may remember our recent article "Digitize Your Wax" (Feb/99, p74). It was a good starting point for the basics of buying and setting up a CD burner, but we didn't cover all the gritty, esoteric details of lifting vinyl tracks. So if you truly want to digitize wax, here is the complete step-by-step process.

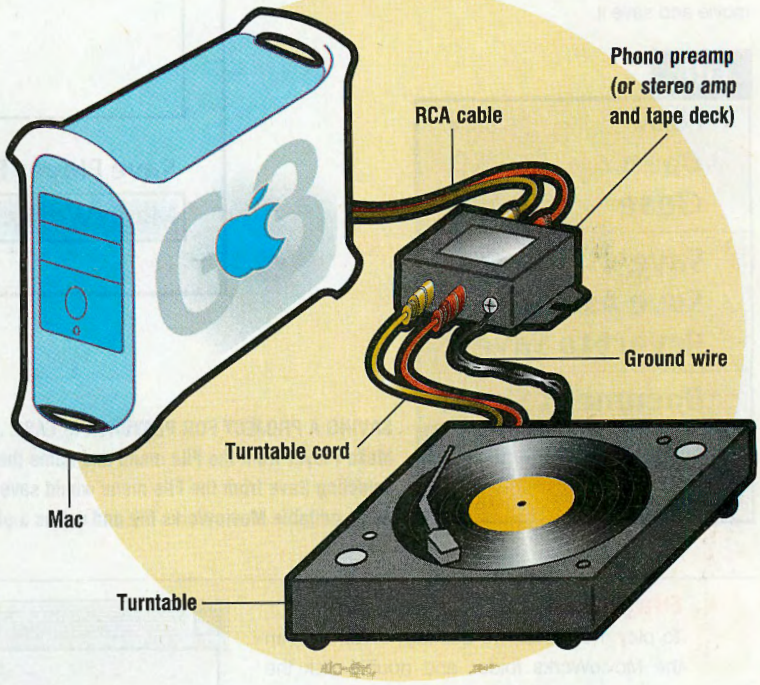


Illustration by Chris Vanderhoof

FIND ULTRA RECORDER 2.4.1 and demos of Peak 2.01 and Ray Gun on The Disc.

Preparation

Set Up Your Turntable

Turntables put out different signals than tape decks or CD players, so you need to use some sort of phono preamplifier between your turntable and your Mac to prevent your record from sounding thin and watery. You can buy an inexpensive preamp at your local audio shop for $20 to $25. While you're there, pick up an extra set of audio cables—the kind with a pair of RCA jacks at each end.

Plug your turntable's audio-out RCA jacks into the preamp's inputs. Then run the spare audio cable from the preamp's output jacks to the audio inputs of your Mac. Be sure you keep the right and left channels consistent. We recommend that you use an AV Mac, because converting from RCA to your microphone jack doesn't work very well. Do a test recording to make sure it sounds right.

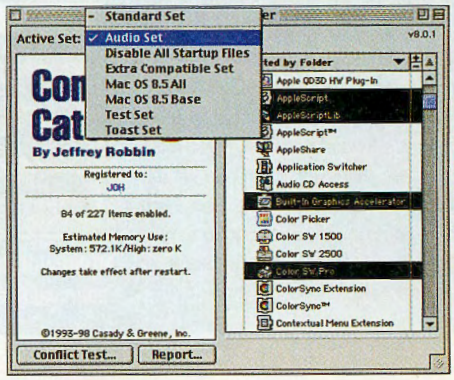
If you don't want to put out the money for a preamp, you *can* tape the record onto an audiocassette and then record from the cassette to your computer. However, this strategy involves extra work and, of course, requires that you have a tape deck.

TO RECORD FROM A TURNTABLE to your Mac, you need to use a phono preamp like the one shown here.

Set Up Your Mac

First, you're going to need *lots* of hard disk space—about 10.1MB for every minute of audio. A full 74-minute CD will take up almost 750MB of disk space, plus you'll need some extra room for editing and tweaking. We recommend using a freshly formatted 1GB drive or drive partition. If you plan on using space on your boot drive, be sure to optimize the disk with a tool such as Norton Speed Disk (use the Multimedia setting) or Alsoft's Disk Express Pro. You should also maximize your CPU's attention by disabling unnecessary extensions, turning off virtual memory and AppleTalk, and quitting unused applications.

IT'S A GOOD idea to format a 1GB disk or partition for recording.



USE YOUR EXTENSIONS MANAGER or Conflict Catcher to create a slim extension set for recording.

Burning Vinyl, Method One

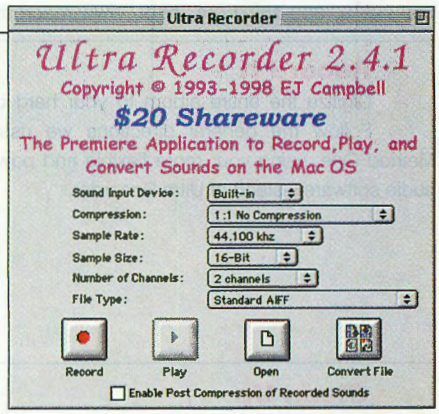
Crude but Nearly Free

If you have a CD burner, you've probably already got Adaptec Toast (800-442-7274 or 408-957-7274, http://www.adaptec.com), as it comes bundled with most burners. Dust off your turntable, shell out $20 for the shareware audio utility Ultra Recorder (http://members.aol.com/ejc3), and you'll have all the ingredients for the least expensive way to record your LPs. The drawback to this cheap method is that you can't edit the tunes or clean them up—and your final CD will consist either of one long track or of individual tracks that don't fade in and out smoothly. Nevertheless, this inexpensive system gets the job done.

1 Set Up Ultra Recorder

Launch Ultra Recorder and set the application to record at 16 bits, 44.1KHz, no compression, and standard AIFF format. These are the standard settings for CD-quality audio. Don't try to save hard disk space by using lower settings—Toast won't be able to make an audio CD if you use any other setup.

SET ULTRA RECORDER to match the settings shown here.



2 Begin Recording

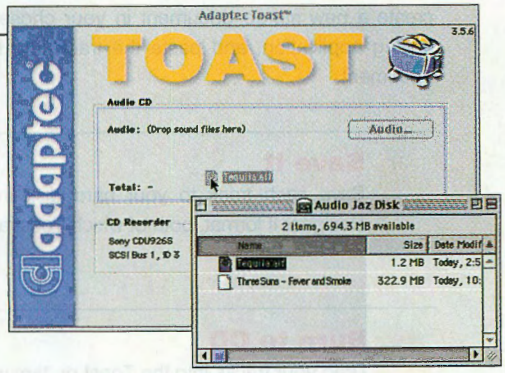
Set the needle down at the beginning of the record and click Ultra Recorder's Record button. At the end of side one, click the Pause button, flip the record, and start recording again. If you insist on recording individual tracks, save each track as a separate file.

HERE'S WHAT YOU WILL see as you record. We recommend recording a whole side of an album at a time instead of individual tracks—otherwise it will take forever.

3 Save and Burn

When you've finished recording the album, save the file. Then drag the audio file to the Toast window and burn your CD. If you've recorded separate tracks, arrange them in any order you like. Could it be any simpler?

TOAST PROBABLY CAME with your CD burner. Just drag the files over to Toast and burn your CD.



The Ground and the 60-Cycle Hum

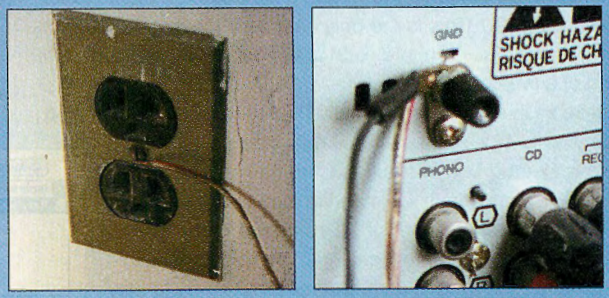
When you start recording your LPs, you may notice a horrible hum clearly audible during quieter passages. This is the dreaded 60-cycle ground loop hum, named for the 60-cycles-per-second alternation of the current that runs through your house. The problem comes from poor grounding of your setup.

First, hook up your turntable to your Mac using the preamp setup as if you're about to record. Then turn the volume way up. If you hear nothing but a quiet hiss, consider yourself lucky. However, if you hear an electrical buzz, you have the 60-cycle hum.

To get rid of the hum, first make sure your turntable's ground wire is attached to the grounding connector on your amplifier. If that's not the problem, try unplugging your amplifier's power cord and plugging it back in with the prongs in the opposite slots.

If the hum persists, ground the phono preamp: Attach one end of a wire to a screw on the case of the preamp, and attach the other end to a screw on your amplifier's case.

If that doesn't work, ground everything to the center screw of your AC outlet cover. Be careful: If the grounding wire touches the prongs of the AC plug, you and your stereo could get a nasty shock.



BE SURE TO GROUND YOUR AMP, or your recording could suffer from the dreaded 60-cycle hum.

Burning Vinyl, Method Two

High Quality and Expensive

For an even better reproduction of your record, you may want to spend some money and use a more robust audio editing program—for example, Digidesign ProTools ($795, 800-333-2137, http://www.digidesign.com), Bias Deck ($399, 800-775-2427, http://www.bias-inc.com) or Bias Peak LE ($99), or Macromedia SoundEdit Pro ($270, 800-457-1774, http://www.macromedia.com). These programs allow you to edit tracks, resulting in much smoother transitions between songs and fewer pops and clicks on the final CD. We used Bias Peak LE, which comes bundled with Adaptec's Jam software ($16). Like Toast, Jam is a CD-burning utility, but it is specifically designed for making music CDs (see the sidebar "Jam Out an Entire Album" below).

1 Record It

Digitize the entire album to your hard drive. Follow the general directions we used in Method One, using your more flexible and powerful audio software instead of Ultra Recorder.

WE USED BIAS PEAK LE for our high-quality recordings.

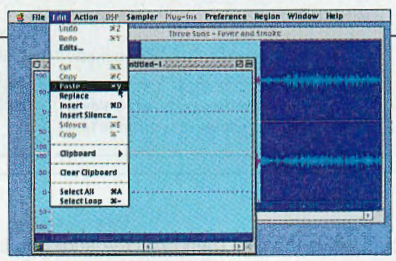
2 Clean Up

Now refine the recording. If you want as clean a sound as possible—without pops, clicks, and other noise—pick up a copy of Arboretum's Ray Gun ($99, 800-700-7390, http://www.arboretum.com), a miraculous plug-in that should work with any high-end audio program. When you finish cleaning your recording with Ray Gun, use your chosen recording software to normalize the audio; this increases the signal without creating any "clipping" distortion.

ARBORETUM'S RAY GUN gets rid of unwanted pops and clicks.

3 Divide the Tracks

Audition each track to locate the precise beginning and end of songs. Select a track, copy it, create a new stereo document in your chosen audio editing application, and paste the track into the new document.



DIVIDE TRACKS so you can skip around with your CD player.

4 Save It

Save each track to your hard disk in either AIFF or Sound Designer II format, both of which Toast and Jam can read.

MAKE SURE YOUR FILES end up in AIFF or Sound Designer II format.

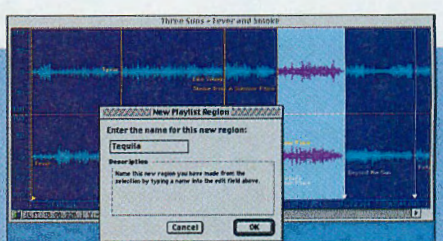
5 Burn to CD

Drag your tracks into the Toast or Jam window. Arrange them in the order you want on the final recording, then burn them onto your CD. Now you can amaze your friends by playing Esquivel's *Infinity in Sound* on your car's CD player!

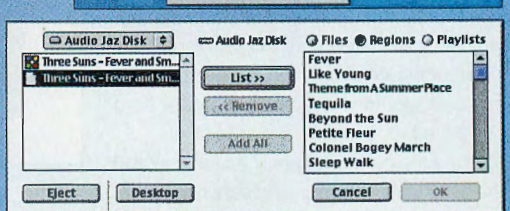
Jam Out an Entire Album

With Jam, Adaptec's audio CD–burning utility, you can digitize an entire album as one long audio file and then mark individual tracks for the CD. This is the only easy way to create a CD from an album whose tunes run into each other without a gap, such as a recording of a live concert.

To make such a recording, just use Bias Peak LE or another high-end audio tool to digitize an entire LP onto your hard drive, as explained in Method Two above. Clean up the sound, then follow Peak LE's instructions for marking out a region on the album. Save each region in Sound Designer II format. When you load these regions into Jam, you can set the pause between tracks to zero, and Jam arranges the songs to play smoothly without interruption.



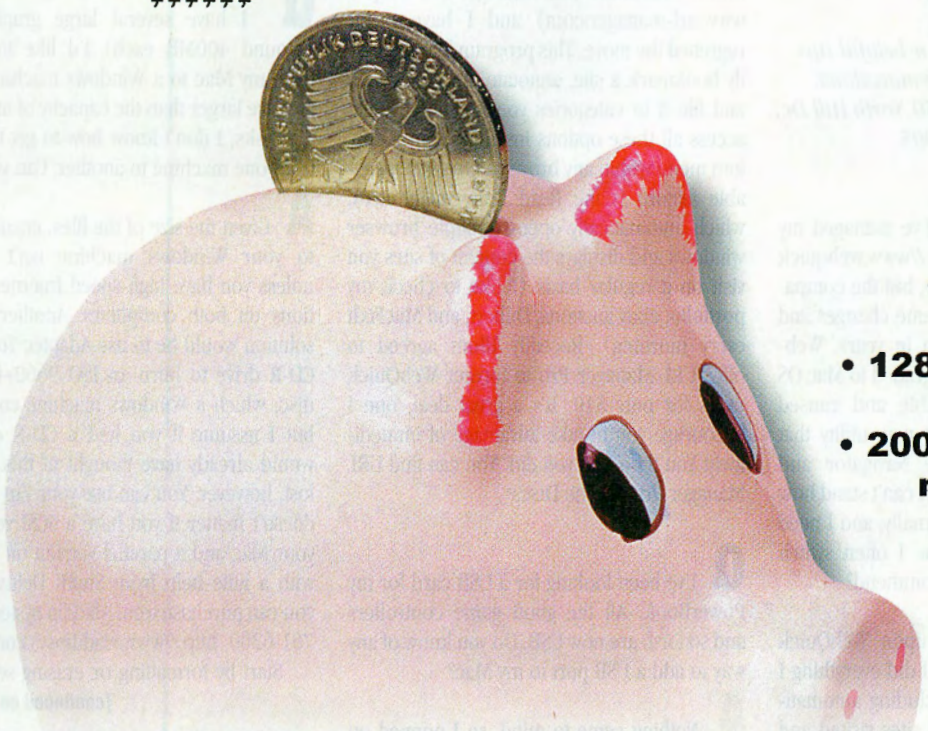
IF YOU RECORD an entire album, you can use Peak LE to separate the tracks by creating regions.



ADD SOUND DESIGNER II–formatted region tracks to Jam, and you can create flawless transitions between songs.

MP 850

Macwelt
01/99



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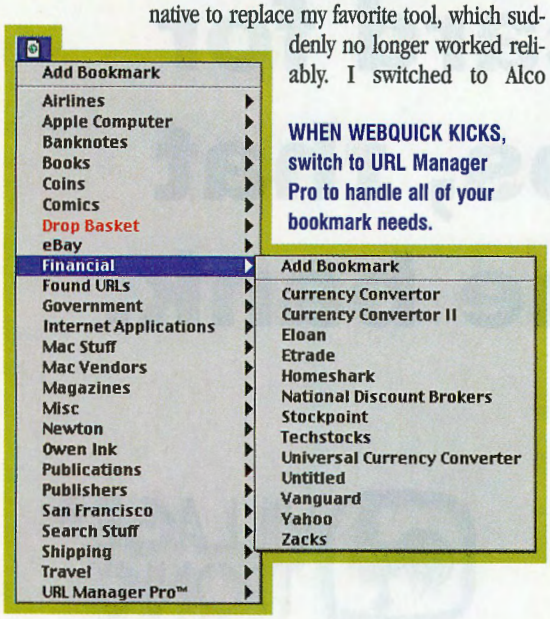
FIND URL Manager Pro 2.5.1 and the Extension Overload 3.4 demo on The Disc.

Q For the longest time I've managed my URLs with WebQuick (http://www.webquick.com) from Europa Software, but the company has undergone several name changes and hasn't updated the program in years. WebQuick worked fine until I upgraded to Mac OS 8.5, then it became unstable and caused crashes. Now I must find a new utility that works with both Netscape Navigator and Microsoft Internet Explorer (I can't stand how they handle bookmarks internally, and I need cross-application software as I often switch browsers). What do you recommend?

A I, too, used to rely upon WebQuick because it was so simple and did everything I wanted with bookmarks, including automatically tracking the last 1,500 sites visited and organizing them by domain name. But when I switched to Mac OS 8.5, I had to find an alternative to replace my favorite tool, which suddenly no longer worked reliably. I switched to Alco Blom's shareware URL Manager Pro (http://www.url-manager.com) and I have never regretted the move. This program lets you easily bookmark a site, annotate the bookmark, and file it in categories you create; you can access all these options instantly from a custom menu within any browser. One indispensable feature is the Read Daily menu item, which automatically opens multiple browser windows and displays the content of sites you visit on a regular basis (I like to check my portfolio, eBay auctions, Dilbert, and MacFixIt every morning). Recently Blom agreed to offer URL Manager Pro to former WebQuick users for only $10. It's a great deal, one I encourage you to take advantage of immediately. You'll be glad you did. You can find URL Manager Pro on The Disc.



WHEN WEBQUICK KICKS, switch to URL Manager Pro to handle all of your bookmark needs.

Q I've been looking for a USB card for my PowerBook. All the good game controllers and so forth are now USB. Do you know of any way to add a USB port to my Mac?

A Nothing came to mind, so I popped on over to http://www.peripherals.net. This site started out as an iMac product finder, but has mutated into a central source of information about all types of peripherals based upon next-generation technologies such as USB, FireWire, IrDA, and Ethernet. Here I located ADS Technologies' (562-926-1928, http://www.adstechnologies.com) USB Port for Notebooks (USBX-501). This Type II PC Card works only on PowerBook G3 Series that support the 32-bit CardBus PCMCIA interface (basically, only the newer PowerBooks with the large single-colored Apple logo on the lid). ADS expects the USB Port for Notebooks to sell for $80 but won't begin selling the device to Mac users until Apple releases Mac OS 8.6 (it should be a done deal by the time this appears in print). This OS should incorporate the necessary USB driver. With ADS's card plugged into your PowerBook, you should be able to take advantage of any Mac-compatible USB device.

Q I have several large graphics files (around 400MB each) I'd like to transfer from my Mac to a Windows machine. As the files are larger than the capacity of my Iomega Zip disks, I don't know how to get these files from one machine to another. Can you help?

A Given the size of the files, emailing them to your Windows machine isn't practical unless you have high-speed Internet connections on both computers. Another possible solution would be to use Adaptec Toast and a CD-R drive to burn an ISO 9660–formatted disc, which a Windows machine could read, but I assume if you had a CD-R drive you would already have thought of this. All's not lost, however. You can use your Zip drives (it doesn't matter if you have a SCSI version on your Mac and a parallel version on your PC) with a little help from StuffIt Deluxe, which you can purchase from Aladdin Systems (831-761-6200, http://www.aladdinsys.com).

Start by formatting or erasing several Zip

[continued on page 86]

SCSI IDE

In the May 1999 installment of this column, a reader asked for a way to use an extra IDE drive as an external device. I still don't know of anyone selling PCI cards that add an external IDE bus to the Mac. However, I recently discovered the IDE-SCSI Card, a small adapter with a 40-pin connector on one side that plugs into the back of an IDE-ATA device (such as a CD-ROM, CD-R, or hard disk drive). On the other side the adapter has a 50-pin SCSI connector into which you plug a SCSI ribbon cable. With the card plugged in, an ATA device essentially becomes a SCSI device. Sounds good, but it has some limitations: The card requires its own four-pin power connector, it works only on 5¼-inch hard drives, and it doesn't let you format drives beyond 8.25GB. If none of this scares you off, you can buy the card for 99 Australian smackers from BlackFire Technology.

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ACTOR

Can't flub my lines again or the director said he'd turn me over to the lion tamers! Okay... "Et tu Bruno? No, that's not right. "Et tu Brun hilda?" Arghh!!

GLADIATOR

I've got to get to the Temple of Mars to make a sacrifice before tonight's contest in the Colosseum. I think I'm losing my touch. Last night the lions nearly took my head off! If only I hadn't missed that last lesson at the Gladiator School...

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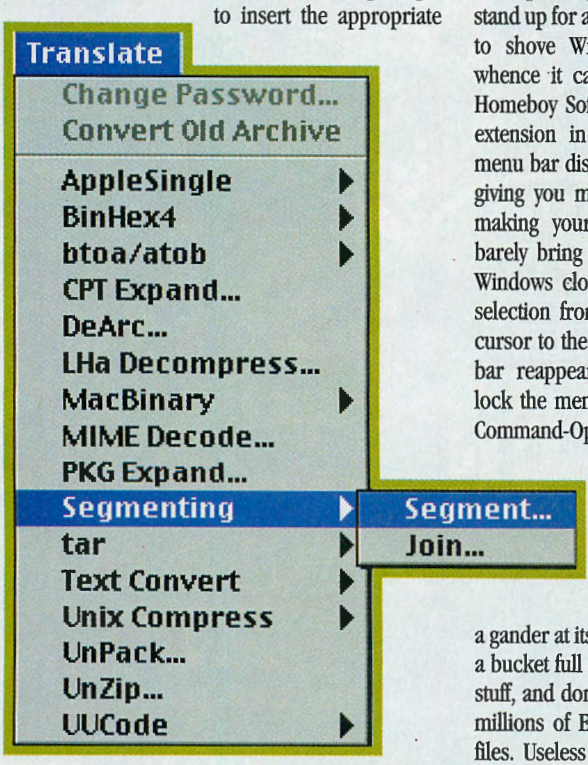
[continued from page 84]

cartridges on your Windows machine. On your Mac, make sure you have Iomega Driver in the Extensions folder and PC Exchange (called File Exchange in newer versions of the Mac OS) turned on in the Control Panels folder. When you insert a Windows-formatted cartridge into your Mac's Zip drive, it should appear on your desktop, allowing you to drag files to and from the cartridge just as you would do with a Mac disk. Do a Get Info (Command-I) on the Zip cartridge and note the available disk space.

Now launch StuffIt Deluxe and compress your large files into a single archive (don't use the self-extracting option). If the archive is still larger than the amount of disk space available on a Zip cartridge, choose Segment from the Segmenting submenu in the Translate menu. In the dialog box that follows, choose Other from the Size Of Segments pop-up menu, enter the available disk space (multiply megabytes by 1024 to convert into kilobytes), and click OK. Back in the Directory dialog box, select your archive and click Segment. StuffIt Deluxe tells you how many segments it will create and prompts you to enter a name and specify a location for the segments. Just accept the defaults and click Save All. Return to the Finder and manually copy each segment to its own Windows-formatted Zip cartridge. Back on your Windows machine, run Aladdin's freeware utility StuffIt Expander for Windows. Follow the prompts to insert the appropriate cartridges as Expander joins the segments and decompresses the archived files.



STUFFIT'S SEGMENTING WORKS ACROSS platforms, so you can use it to move big files between Mac OS and Windows machines.

Q I don't drink coffee, so what am I to do with my Mac's CD-ROM drive tray?

A Apple doesn't like to publicize it, but the fact remains that most CD-ROM drive trays are fully compatible with a wide range of beverages and containers, not just coffee mugs. May I suggest you use the tray to hold a can of soda, a bottle of fruit juice, or even a cup of tea? (Seriously, folks, it's not a good idea to ingest food or drink in the region of your precious Mac...but you knew that.)

Q At work my employers force me to use Windows 98, but I bring in my PowerBook instead of using the computers they give us. I rely on Kaleidoscope's (http://www.kaleidoscope.net) Windows 98 scheme to replicate Windows on my Mac, but the menu bar at the top of the screen is a dead giveaway that I'm actually using a Mac. I know GoMac (http://www.actionutilities.com) can add a program bar to the bottom of the screen, but do you know of any program that can hide the top menu bar?

A What has the world come to when people must bastardize their Mac's user interface just to keep their jobs? If you don't have the guts to stand up for all that's decent and tell your boss to shove Windows back into the orifice whence it came, try using Menu Shade by Homeboy Software. Place this $5 shareware extension in your System Folder, and the menu bar disappears when you don't need it, giving you more room on the desktop and making your Mac look more like...I can barely bring myself to write this...a pathetic Windows clone. When you need to make a selection from the menu bar, just move the cursor to the top of the screen and the menu bar reappears momentarily. You can even lock the menu bar in the visible position by Command-Option-Control-clicking when you feel it's safe to let your Mac's true colors shine.

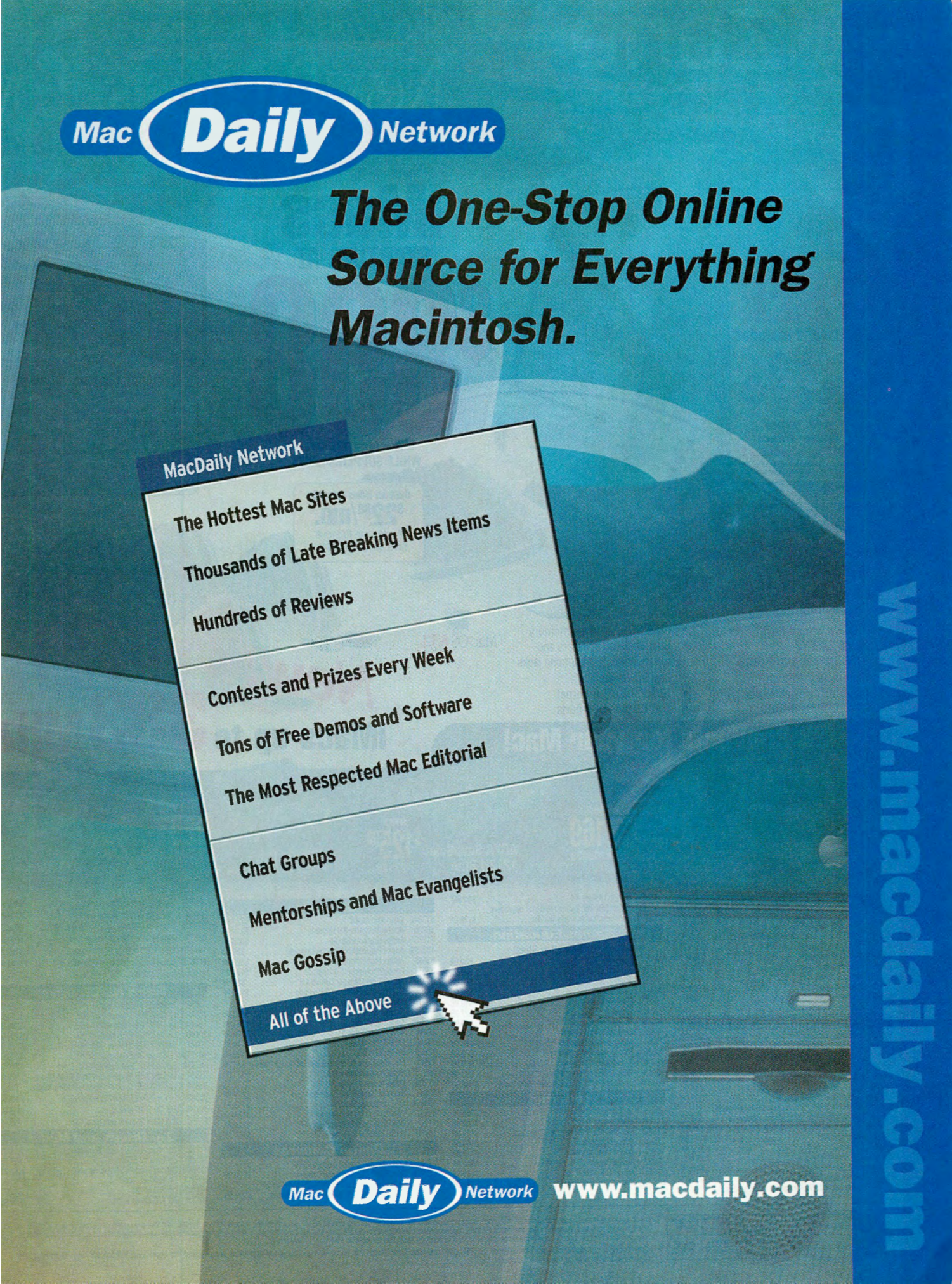
Q Periodically I open up the Extensions folder and have a gander at its puzzling contents. I find I've got a bucket full of assorted ATI extensions, IX3D stuff, and don't let me even get started on the millions of Ethernet CS, CS II, LC, and Enet files. Useless extensions are the bane of my existence and prohibit me from sleeping. Anal? Quite. I assume I don't need them all, but how do I find out which ones I can trash? Apple System Profiler gives me all sorts of great information, but I still don't know what kind of PCI, graphics card, Ethernet, or other assorted mystery media I have, let alone what updates I need. Please help. Show me the way, oh Wise One.

A Brother, I feel your pain. Although it's embarrassing to admit this as a technical columnist, like you I don't have a clue what the purpose of all that crap in my System Folder is. Whenever I try out a new piece of software or update the Mac OS, I usually allow the installer to perform an Easy Install, putting whatever it thinks it needs into my System Folder. Unfortunately, the installers aren't too bright, and they load up my hard drive with extensions, control panels, and

FIGURE OUT WHAT'S FLOATING AROUND in your System Folder with Extension Overload.

other files I don't really need and certainly don't understand. The new Extensions Manager (part of the Mac OS) provides some information about files from Apple, and Conflict Catcher from Casady & Greene (800-359-4920 or 831-484-9228, http://www.casadyg.com) also offers some insight into what's residing in your System Folder. The best resource I've found, though, is the $10 shareware program Extension Overload 3.0 from Teng Chou Ming (http://www.mir.com.my/~cmteng). This searchable and printable program explains the source and function of over 1,000 of the most common freeware, shareware, and commercial extensions and control panels, from System 7 to 8.5. After perusing the 200-plus pages, I found half a dozen candidates for deletion in my System Folder—conserving memory, disk space, and my sanity by virtue of the fact that fewer extensions invariably translates into smoother computing. Additionally, Extension Overload contains information about Mac error codes and Easter eggs, and many useful tips for speeding up your Mac. Download your own copy today or find it on The Disc. It could be the best $10 you ever spent on your Mac.

Owen W. Linzmayer is a San Francisco–based freelance writer and the author of the recently released *Apple Confidential* (http://pw1.netcom.com/~owenink/confidential.html).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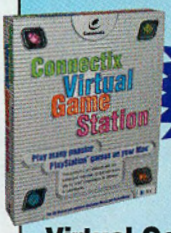

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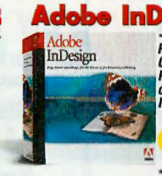

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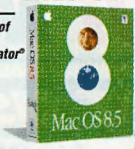

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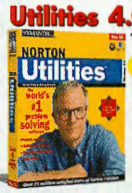

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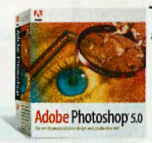

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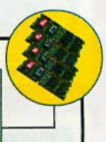

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IBM IDE PERFORMANCE — 7200RPM 512K BUFFER 9.5MS SEEK

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MW EDITORS' CHOICE March '98

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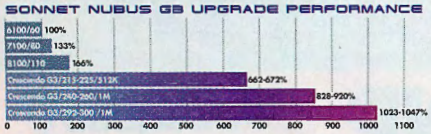

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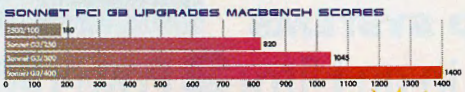

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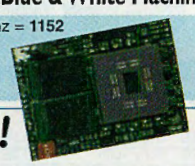

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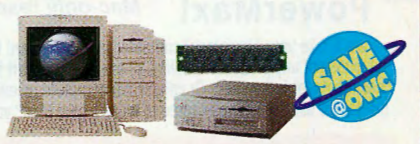

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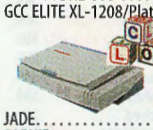

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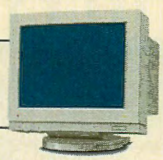

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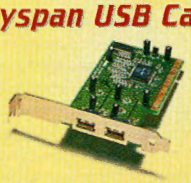

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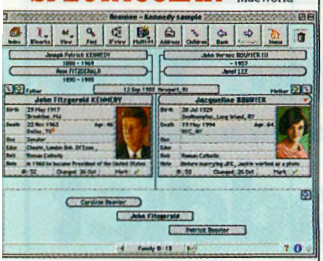

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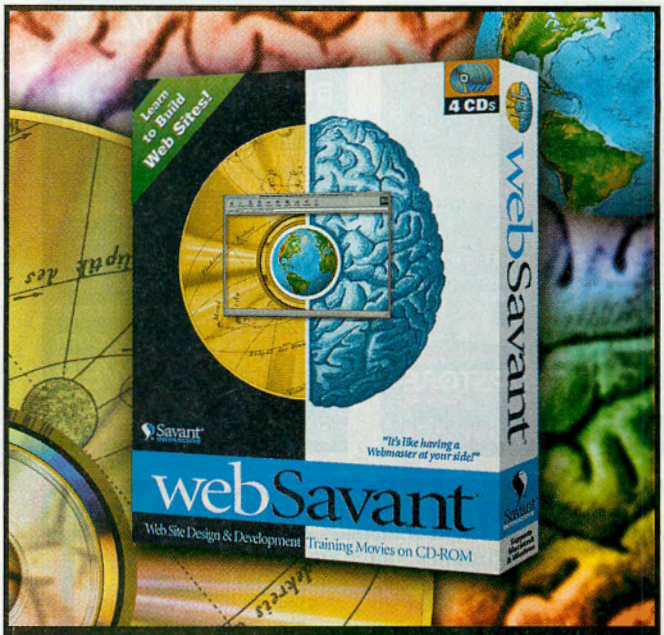

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A certain way to speed up Photoshop is to reduce your cache to the lowest possible setting. Also make sure that virtual memory is off. Photoshop has its own virtual memory and cache built into the program (the scratch disk) and anything your OS is trying to do that is similar ends up being at odds with Photoshop.
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Or... get a gig of RAM. Open up a huge RAM disk and shove a copy of Photoshop into the RAM disk. That should speed things up... Just remember to save to the desktop or else if you crash you will lose it all -including the copy of Photoshop!
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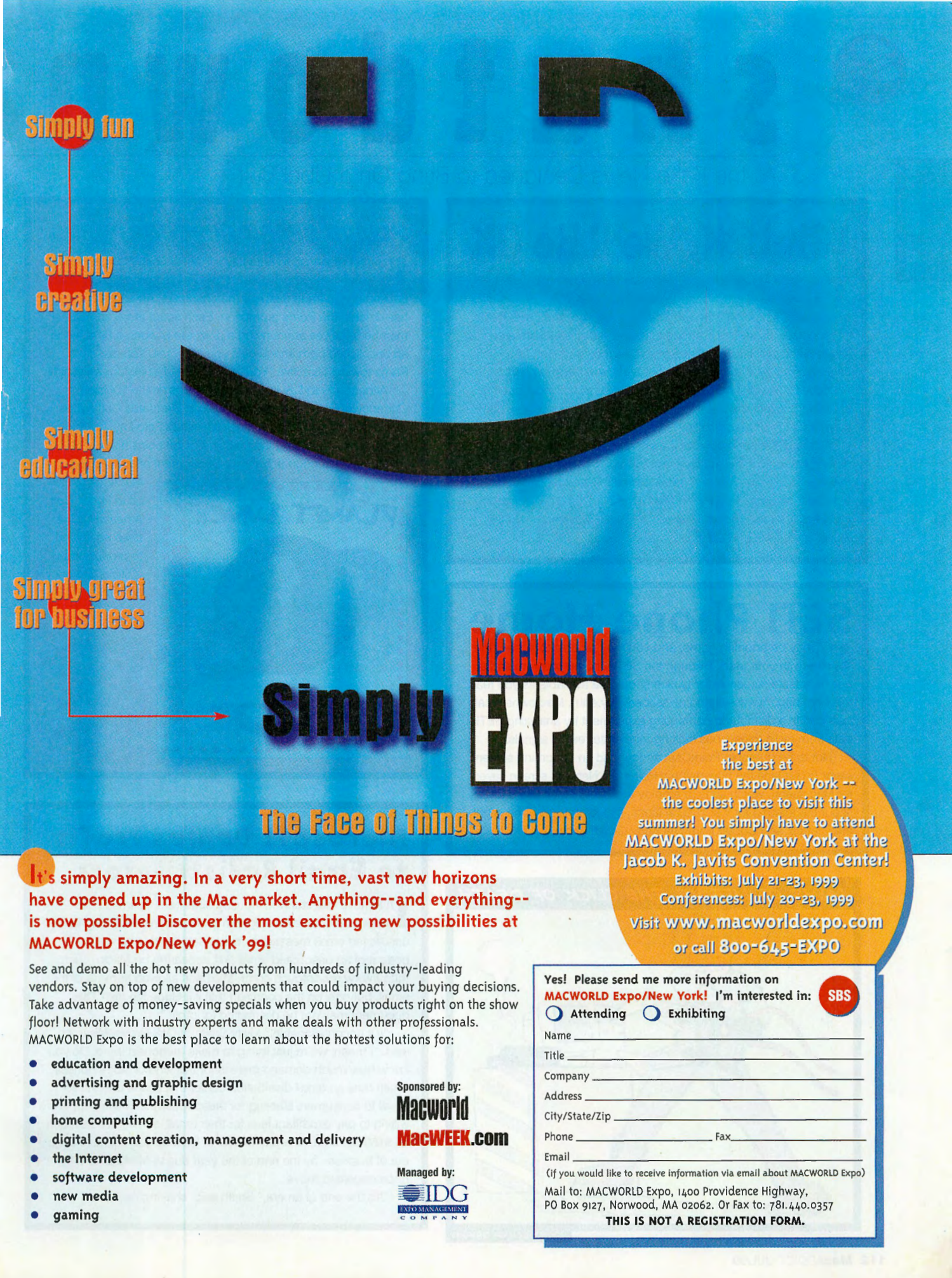

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All the Fake News Designed to Bring On a Libel Suit

Y2K-U2K, We'll Be OK

The Jaap-Orr Company, a Cincinnati-based advertising firm, is seeking to ease Y2K fears with its "Y2K-U2K, We'll Be OK" line of products, including tiny computers, CD-ROMs, and coins made of chocolate, as well as computer-shaped red-hot suckers and a full line of shirts proclaiming vague unease about the future after January 1, 2000. For info, check out http://www.jaap-orr.com.

If the "Y2K-U2K, We'll Be OK" line is successful, look for other soothing product lines, like the "Warm as Toast" wool socks commemorating global warming.

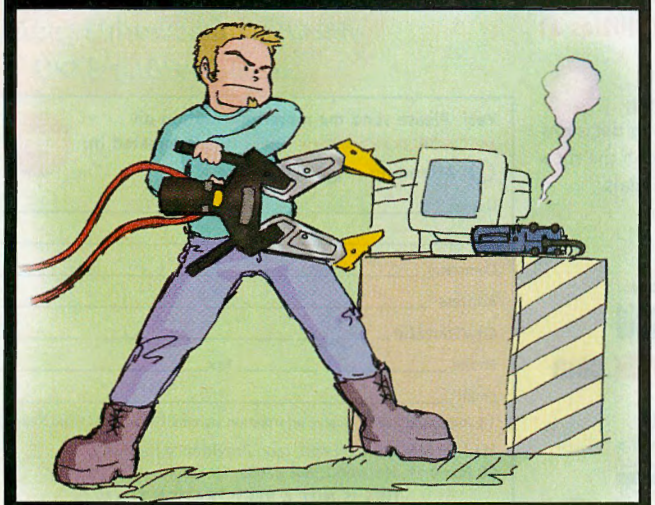
Some of the less successful campaigns that have attempted to assuage people's fears throughout history have included the "Black Plague: It's Kind of Vague" chocolate flea-infested rat campaign of the mid-fourteenth century, and the infamous 79 A.D. Pyroclastic Flow Festival toga line with the catch phrase "Lava and Ash, as Good as Guavas and Cash."

SETI Phone Home

ET may be phoning home, and you may be able to answer the call with your Mac. Through the SETI@home program and a downloadable screen saver (which should be available as you read this from http://www.setiathome.ssl.berkeley.edu), Mac owners can take part in a distributed computing experiment by analyzing SETI data from radio telescopes looking for extraterrestrial signals.

Not to be outdone, PointCast announced an upcoming screen saver (to replace the now-defunct PointCast Network screen saver for Mac users), which aims to employ a cluster of Mac users to scour the Internet for lost cultural icons, including Baby Jane, eight-track tapes, and Cooter from *The Andy Griffith Show*.

JAWS OF LIFE VS. THE CLICK OF DEATH



DOODLE BY MARK SIMMONS

PLOIDS SPARK COPYCAT PORNS

In direct response to Frito-Lay's Planet Lunch Ploid promotion (in which consumers collect Ploid points from Frito-Lay snack packages and trade them for merchandise), America Online has created the Porns promotion. Each spam email an AOL member receives announcing a porn site is worth a Porn, while an unsolicited porn image gets you 10 Porns. You can save Porns toward attractive "You've got porn" T-shirts or sweatshirts.

Although Frito-Lay is promoting Ploids as the "Official Currency of Fun," the International Fun Standards Committee denies that it granted a currency license to Frito-Lay. Calls to the U.S. Mint regarding the pressing of fun coins have gone unreturned, although a Treasury Department official did visit *MacAddict* to tell us to knock it off. America Online does not intend to produce the "Official Currency of Porn."

Microsoft Denies Profit to Email Redistributors

In a move that stunned industry observers, Microsoft has denied companies the right to profit from redistributing its unsolicited email messages. In a tersely worded item at the bottom of an unsolicited email first appearing on MacInTouch (http://www.macintouch.com), Microsoft allowed copying of the email, but only on the condition that it include the text "This document may not be distributed for profit."

"It's unconscionable," Misty Smith of Oak Grove, Missouri, said. "I mean, we're just trying to make an honest living. Do you know how much demand there is for this kind of stuff? Honestly." Smith runs an email distribution center that sends unsolicited email to consumers starving for these missives. These people are willing to pay exorbitant fees for their email, sometimes as much as $150 per item. Analysts expect at least 30 such centers to go out of business by the end of the year due to Microsoft's unprecedented move.

"It's the end of an era," Smith said, shaking her head.

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For screen shots and additional information visit oni.bungie.com

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